



MedQuest Software

MedQuest Quality (IQC) Reference Manual

Version 8.00

June 30, 1999

Contents

OVERVIEW.....	1
INTRODUCTION	1
QUICK START.....	2
INSTALLATION	2
Hardware	2
MedQuest Quality Components.....	2
MedQuest Quality Installation	3
Help	3
MEDQUEST QUALITY FUNCTIONS.....	4
MANAGE MODULES	4
Create the Default/User-Defined MedQuest Quality Database/Module Tables.....	5
Default MedQuest Quality Database/Module Tables.....	5
User-Defined MedQuest Quality Database/Module Tables	6
COMPARE CASES.....	7
Select a Comparison.....	8
General Filter Tool for Comparisons/Adjudications/Reports	8
Filter Application Areas	8
Load Case Comparison.....	12
Track Adjudication Time.....	12
Comparison Spreadsheet	12
Comparison Statistics	13
View Case Comparison Notes	16
Delete Case Comparison	16
Pause Case Adjudication	17
Exit Button	17
PREPARE CASES FOR COMPARISON	17
Types of Abstraction Cases	17
Comparison Scenarios.....	17
Plan the Comparison	18
Compare Cases (Single).....	18
Compare Cases (Batch).....	20
Matching and Scoring Rules	25
Single Variable Comparison	25
Multiple Entry Variable Comparison.....	25
ADJUDICATE/EXPLAIN CASES	26
Enter the Adjudicated Value.....	27
Record the Adjudicated Values.....	28
Adjudication Status	29
In IQC Warn User on Load if Original or Reab Data Have Changed Since Comparison Was Run	30
Explain the Adjudicated Value	30
User-defined Mismatches	31
View Notes	32
Access Variable/Screen Help	33
Exit the Adjudication/Explanation.....	33
SAVE AS.....	33
CREATE GOLD STANDARD CASE.....	33
VIEW/PRINT REPORTS	34
View/Print Comparison Report #1	38
View/Print Comparison Report #2	39

<i>View/Print Quality by Case Report.....</i>	<i>41</i>
<i>View/Print Quality by Screen Report.....</i>	<i>42</i>
<i>View/Print Quality by Variable Report #1.....</i>	<i>44</i>
<i>View/Print Quality by Variable Report #2.....</i>	<i>45</i>
<i>View/Print Reasons by Comparison Report.....</i>	<i>47</i>
<i>View/Print Reasons by Variable Report.....</i>	<i>48</i>
<i>View/Print Abstract Accuracy (Kappa +) Report.....</i>	<i>50</i>
<i>View/Print Adjudicated Reason Internal Report.....</i>	<i>52</i>
<i>View/Print Adjudicated Reason Facility Report.....</i>	<i>53</i>
<i>Abstractor by Case Report.....</i>	<i>54</i>
<i>Abstractor by Variable Report.....</i>	<i>56</i>
<i>Abstractor Summary Report.....</i>	<i>57</i>
VIEW IQC.ERR	58
DELETE IQC.ERR.....	58
REBUILD INDEXES	59
RECOVER FROM ARCHIVE.....	59
APPENDIX A	60
MEDQUEST QUALITY FIELDS.....	60

OVERVIEW

INTRODUCTION

The purpose of the MedQuest Quality Program (formerly know as IQC) is to assist the user in evaluating the quality of the data abstracted using the MedQuest data entry system. This program allows the user to review the quality of the data in several ways (e.g., variable by variable, screen by screen, and for the overall case).

The MedQuest Quality Program matches two selected sets of data abstracted from a single medical record and displays the results of the comparison side by side on the screen. This user can save the correct value (adjudicated value), enter reasons for any apparent differences, and report on these differences. In addition, the MedQuest Quality Program allows the user to view and print reports on the comparison. Finally, the program allows the user to create a Gold Standard case by copying a selected case that was abstracted and deemed appropriate to be included as a Gold Standard case.

While working with the application, context-sensitive help can be accessed by clicking on the <F1> key. The content of the help information displayed is the same as the information provided in this manual.

NOTE:

If MedQuest is being used to collect data into an ODBC database, the MedQuest Quality program cannot be used to compare the data since reabstraction data cannot be created using ODBC.

QUICK START

INSTALLATION

This section discusses the following topics:

- Hardware
- MedQuest Quality Components
- MedQuest Quality Installation
- MedQuest Quality Help

HARDWARE

To operate the MedQuest Quality Software, the following hardware/software are required:

- IBM or IBM-compatible personal computer with 80486/50 or higher processor
- VGA or VGA-compatible display monitor
- MS-DOS® version 5.0 or higher and Microsoft Windows version 3.1, 95, 98 or NT
- Microsoft or Microsoft-compatible mouse or pointing device
- Hard disk with a minimum of 12 megabytes of space
- Eight megabytes of RAM (sixteen are recommended)

MEDQUEST QUALITY COMPONENTS

The MedQuest Quality Program consists of the following components:

- MedQuest Quality setup
- Libraries setup
- Medications setup
- ICD9

To install, re-install, and uninstall the MedQuest Quality software, follow the instructions described in the following sections.

MEDQUEST QUALITY INSTALLATION

The installation of the MedQuest Quality software and other required components is explained in detail in the README.TXT file found on the installation CD.

HELP

General online help is available in the MedQuest Quality Program. Context-sensitive help is available from any window by clicking on the <F1> key.

MEDQUEST QUALITY FUNCTIONS

MANAGE MODULES

Module Acronym	Module Description
AAA	AAA Module
AT2	AT2 Module
DCA	DCA Module
EX1	EX1 Module
EX2	EX2 Module
EX3	EX3 Module

The **Log In/Manage Modules - MedQuest Quality** window appears when the MedQuest Quality Program is started. To protect ineligible users from gaining access to the MedQuest Quality function, a valid user name and password must be entered. However, if the **MedQuest Quality Program** is accessed from the **MedQuest** utility, this restriction does not apply.

Set the path to modules (Project Database) in the *Path to Project Database (FILES.MDB)* text box. This will display the modules in the project. Select the desired module by clicking on it. Once the module is selected, the module paths to the Dictionary, Data, Medications/ICD9/Abbreviations, and Employee databases will be displayed.

If the CCP module is installed in D:\MDQ, then type "D:\MDQ" in the *Path to Project Database (FILES.MDB)* text box.

EXAMPLE:

When an invalid path is entered, the text in the *Path to Project Database (FILES.MDB)* text box becomes red. This indicates that the specified directory does not have a valid project file for the selected module. If the module of interest cannot be located, contact the System Manager or refer to the installation instructions for the MedQuest Manager (SMS) software.

When a valid path is entered, the text in the *Path to Project Database (FILES.MDB)* text box is black. At this stage, select a module, enter a valid user name and password, and then click on the <LOAD MODULE> button to proceed with the program.



The MedQuest Quality Program was written to provide maximum flexibility for working with a number of modules in different directories. This flexibility places a burden on the user to plan how to most effectively use the MedQuest Quality Program to obtain accurate data and perform meaningful analysis. Therefore, it is strongly recommended that a strategy to manage the MedQuest Quality data be developed by the user in conjunction with the System Manager.



If MedQuest is being used to collect data into an ODBC database, the MedQuest Quality program cannot be used to compare the data since reabstraction data cannot be created using ODBC.

CREATE THE DEFAULT/USER-DEFINED MEDQUEST QUALITY DATABASE/MODULE TABLES

DEFAULT MEDQUEST QUALITY DATABASE/MODULE TABLES

The MedQuest Quality Program compares two abstracted cases. All comparisons performed by the MedQuest Quality Program are saved in a default database file called **IQC.MDB**. This file is stored in the **REAB** directory where all the reabstraction cases are located. This directory is automatically created when a module is created in MedQuest.

EXAMPLE:

If the CCP module is installed in the D:\MDQ directory, the location of the data files required by the MedQuest Quality Program will be:

\MDQ\CCP.MDB	Original abstracted cases
\MDQ\REAB\CCP.MDB	Reabstracted cases
\MDQ\REAB\IQC.MDB	MedQuest Quality database of comparisons

The MedQuest Quality Program creates a separate table in the default IQC database (i.e., IQC.MDB) for each module to be analyzed. The table name includes the three characters representing the name of the module and the letters IQC.

EXAMPLE:

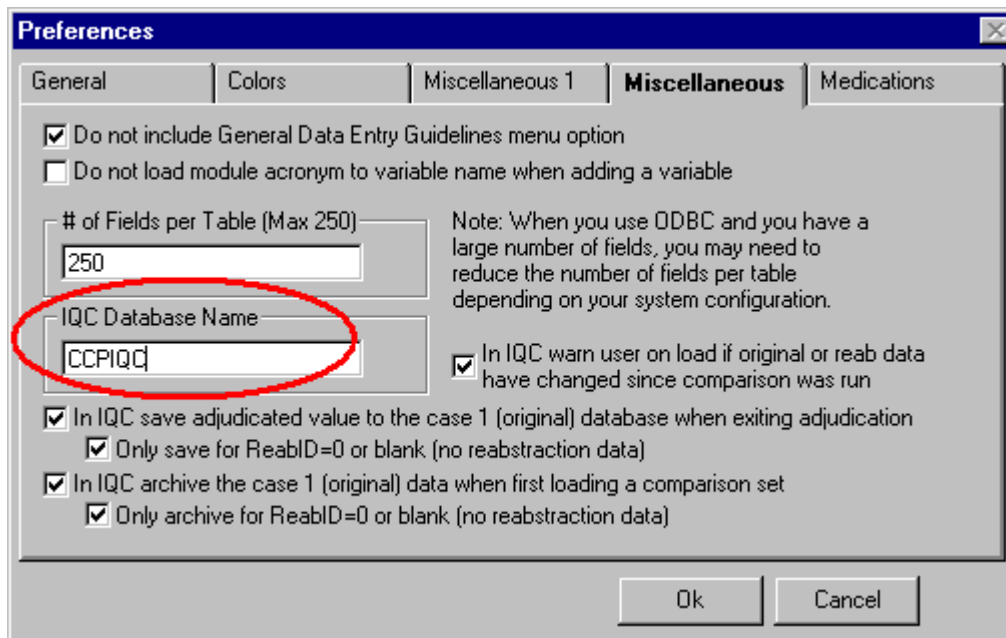
For the CCP module, the MedQuest Quality data will be stored in the CCPIQC table within the IQC.MDB.

If the "XXX" table in the IQC database does not exist because this is the first use of the module being compared in the MedQuest Quality Program, the MedQuest Quality will prompt the user to create the "XXX" table. To continue with the program, click on the <OK> button. Since the MedQuest Quality Program allows the user to switch among various modules installed in different directories, it is likely that more than one IQC database file will be created.

USER-DEFINED MEDQUEST QUALITY DATABASE/MODULE TABLES

The MedQuest Quality Program compares two abstracted cases. All comparisons performed by the MedQuest Quality Program are saved in a database file that can be defined by the user. This file is stored in the **REAB** directory where all the reabstraction cases are located. This directory is automatically created when a module is created in MedQuest.

While in the Design function of MedQuest, from the FILE menu select the Preferences option and click on the Miscellaneous 2 tab. The default name IQC can be changed by clicking in the *IQC Database Name* text box and typing in a new name, up to eight characters in length, that will have a default extension of **.MDB**.



EXAMPLE:

If the CCP module is installed in the D:\MDQ directory, the location of the data files required by the MedQuest Quality Program will be:

\MDQ\CCP.MDB Original abstracted cases

\MDQ\REAB\CCP.MDB Reabstracted cases

\MDQ\REAB\CCPIQC.MDB MedQuest Quality database of comparisons

The MedQuest Quality Program creates a separate table in the CCPIQC.MDB for the CCP module to be analyzed. The table name includes the three characters representing the name of the module and the letters IQC. For the CCP module, the MedQuest Quality data will be stored in the CCPIQC table within the CCPIQC.MDB.

This naming convention may be useful when comparing many records in a single module. The user may want to have a separate MedQuest Quality database for a specific module or the user may want to group similar modules within a specific MedQuest Quality database. Whatever the overall design reasons, the user will need to have guidelines for maintaining multiple MedQuest Quality databases.

COMPARE CASES

Once a module is selected and the program creates both the MedQuest Quality database (default IQC.MDB) and the MedQuest Quality module-specific table (XXXIQC [where XXX is the module acronym]) in the IQC database file, the program will display the **IQC Program** screen. This is the screen where most of the activities are performed.

Title	Case One	Case Two	Adjudicated	Reason
FMAS d/c date	05/25/1999 12:00:00	05/25/1999 12:00:00		
FMAS marital status	Married	Married		
zipcode	46307	46307		
MTF	4444	4444		
Arr. date	05/05/1999	05/05/1999		
Arr. time	12:00	12:00		
Demographics2				
Beneficiary Status	Civilian	Civilian		
paysource	*Medicare	TriCare Senior Prime	Medicare	Entry
Admission type	Emergency	Emergency		
Pre-arrival setting	Home	Home		
Flu Variables				
Influenza vaccine prior	Yes	Yes		
Flu vaccine during admission	Yes	Yes		
Pneumococcal vac. prior	Yes	Yes		
Pneumococcal vac. during	No	No		
Hx flu vaccine reaction	No	No		
Hx reaction pneumococcal vac	No	No		
Hx allergy egg.thimerosal	UTD	Yes		
D/C plan for flu vaccine	UTD	No		
D/C planning pneum vaccine	UTD	UTD		
Refused influenza vaccine	No	Yes		
Refused pneumococcal vaccine	Yes	No		
Other reason flu not given	Yes	UTD		
Other reason pneum not given	No	Yes		

Possible	# Match(%)	(Standard)	(+/- 5%)	(+/- 5%, reason adjusted)
33	26	(78.8%)	26	(78.8%)

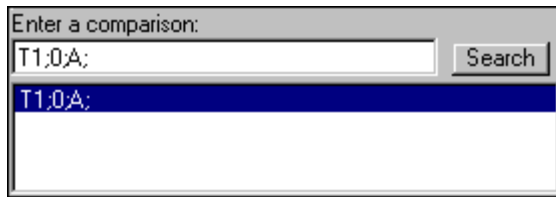
The **IQC Program** screen provides the following information: the location of the MedQuest Quality database, the cases that are being compared, the variables and values in each case, whether the user is in **View Only** mode, the adjudication status, and the comparison statistics. It also enables the user to load case comparisons, filter for specific comparison sets, adjudicate case data and explain discrepancies, automatically save the adjudication, include any notes associated with a comparison set, delete case comparisons, pause the adjudication time, and warn the user if any changes exist since the last time the comparison was loaded.

The user can resize the **IQC Program** screen each time the program is started.



Click on the <MINIMIZE> button in the upper right corner to make the **IQC Program** screen smaller. Then to enlarge or reduce the screen, use the double arrow mouse indicator to drag (enlarge) or push (reduce) the right side or the bottom of the screen.

SELECT A COMPARISON



Enter a comparison:

T1;0;A; Search

T1;0;A;

If the MedQuest Quality Program has already been used to perform a comparison between two cases for the selected module, that **Match Set** will appear in the *Enter a Comparison* list box. A **Match Set** indicator consists of three identifiers: a Control number, a Case 1 identifier (i.e., a single unique character that identifies the case as an Original [always a "0"], a Reabstraction or a Gold Standard case), and a Case 2 identifier (i.e., a single unique character that identifies the case as an Original [always a "0"], a Reabstraction, or a Gold Standard case).

EXAMPLE:

AL000001;0;A;

where

AL000001 = Control Number

0 = Case 1 Identifier (Original case [0])

A = Case 2 Identifier (Reabstraction)

To scroll through the comparisons, click on the <ARROW> button on the scroll bar next to the *Enter a Comparison* text box and scroll through the list of matched sets. To select a desired **Match Set**, click on the set in the list. If no comparisons are listed, perform a comparison using one of the COMPARE menu's options (i.e., **Single** or **Batch**).

GENERAL FILTER TOOL FOR COMPARISONS/ADJUDICATIONS/REPORTS

A general filter/query-building tool has been added to the MedQuest Quality to allow the user to build filters such as a predefined list of variables to ignore on scoring and similar choices. This general query tool lets the user build context sensitive queries at different locations in the MedQuest Quality Program so that records or information that are not required, can be excluded.

FILTER APPLICATION AREAS

There are five application areas where the **Filter** function is available:

1. **Selecting records to display on the comparison grid to include in scoring.** The user can click on the <FILTER> button on the main **IQC Program** screen. The user can select the records to display and score by fieldname, editttype, screen, reason, and whether it has been adjudicated or whether it has a mismatch.

2. **Selecting a case to compare in the Single Comparison function.** The user can click on the <SELECT> button beneath the Case 1 and Case 2 selections to select the filter to apply. The user can select records by abstractor, reabstraction ID and can enter any other general query that applies to the database being searched.

3. **Selecting a set of cases to compare in the Batch Comparison function.** The user can click on the <CUSTOM FILTER> radio button on the **Compare Cases (Batch)** screen and then click on the <FILTER> button to select the filter to apply. The user can select records by abstractor, reabstraction ID and can enter any other general query that applies to the database being searched.

4. **Selecting records to include in the Reports function.** After selecting a report, the user can click on the <FILTER> button located on the **View/Print Report** screen. This filter will be applied to the highlighted report, except those reports where a comparison set can be selected on which to report. These include Comparison Report #1, Comparison Report #2, Reasons by Adjudication, Adjud./Reason Internal, and Adjud./Reason Facility. For these reports, the <SELECT> button, located on those specific report screens, can be used to choose the desired filter.

5. **Selecting the records to save in the Save As function.** The user can click on the <FILTER> button that is located on the **Save As** screen. This filter will be applied to the records that exist in the IQC database to determine if they should be copied to the new database file.

For all of the above choices, when the user clicks on either the <FILTER> or <SELECT> buttons, the **Select Filter** screen will be displayed. On this screen, the user has the choice of selecting a predefined filter by highlighting a filter from the list and clicking on the <OK> button. This filter will become the filter that is applied to the currently selected application area, i.e., selecting a case to compare in the **Single Comparison** function. For example, on the main **IQC Program** screen, the user could select a predefined filter, Dates Only, to display those records for a given comparison set on the screen.

The (Default) No Filter option is a special filter type that always exists and removes any existing filter in use. When the MedQuest Quality is initially started for a module, the default option will be (Default) No Filter.

Users can add new filters by selecting the <NEW> button on the **Select Filter** screen. When adding a new filter, the user must enter a filter description and a filter name (must be unique). After completing the information on the **Add New Filter** screen, click on the <OK> button to save the new filter or the <CANCEL> button to exit adding a filter. If the <OK> button is selected, the **Edit Filter Window** screen will be displayed for entering the filter logic. Note that any added filters will be unique for each module IQC data in the IQC file. For example, the CCP module filters will be kept separate from the FIB module filters. Also, for each new filter, that filter will only be added for that application area, i.e., the Reports application area. To display the filter for all application areas, check the *Generally Available* check box on the **Add New Filter** screen or the **Edit Filter Window** screen.

Users can also delete filters [except the (Default) No Filter] by selecting the filter to be deleted and clicking on the <DELETE> button. The MedQuest Quality Program will ask the user to verify the delete request before completing the deletion. The default filter can be changed to another default filter for each of the five application areas. To perform this function, select the filter to become the new default filter and click on the <MAKE DEFAULT> button. A different default filter can be selected for each of the five application areas or combinations thereof. The default filter is the filter that is loaded when the MedQuest Quality Program for the selected module (or for all of the modules located in the selected IQC database) is started.

The default filter feature ensures that each user in a multi-user environment will use the same filter for the different application areas. For example, the user may want to have a filter that displays mismatches for adjudication as the default for the display of comparison data on the main screen. Or, the user may want a filter for reporting that displays all of the records except a given set of variables that will not be included in scoring.

The users can also dynamically change filters for different purposes. Once a user selects a filter, that is the filter that remains in use until the user changes that filter for the given application area or until the MedQuest Quality Program is exited. The default filter for a given application area is used when starting up the program again.

The user modifies the logic of the filter by choosing the <EDIT> button on the **Select Filter** screen. When this is selected, the **Edit Filter Window** is displayed. There are two main selection criteria sections on this screen. The only other place these two main sections appear are when editing a filter for a report. The first section defines those records that will be displayed, scored, or reported on in the IQC table. These sections are available when editing a filter for application areas one and four. In these sections, specify the variables, edittypes, reasons, forms, whether to include adjudicated values, and whether to include mismatches. This is accomplished by selecting to include/exclude the given items in each list. To add/delete variables from the list, click on the <ADD> button. For the other options, select the applicable items from the lists provided in each section.

The second section defines those records from the original/reabstraction databases that are to be used. The user can specify the abstractor, reabstraction ID and general logic for Case 1 and Case 2 as applicable. Note that there is context sensitivity to the application of the logic that makes the most sense.

FILTER EXAMPLES

In the Reports section the user can choose to define a filter that displays all of the mismatched variables for the original abstractor "Steve" and for the reabstractors "John" and "Mary."

Notice that there is maximum flexibility in the definition of the filters that the user can define and use. For example, it is possible to use the same filter across different application areas such as using the same filter for displaying a comparison set on the main screen (display all of the date variables for abstractor "Steve") and on which to report. This flexibility is available by checking the *Generally Available* check box when adding/editing a filter.

The user has the flexibility to define all of the logic for a specific filter even if only part of the logic will be applied. For example, in a filter where the user wants to display all of the date variables for a specific abstractor, the selected comparison set may or may not be a case where the original abstractor is "Steve". The user selects the comparison set to load.

However, the second part of the query (display all comparison sets that have the original abstractor as "Steve") can be used when selecting the set of comparisons to batch compare. Then when the comparison set is loaded, all of the date variables using the second part of the logic in the filter will be displayed. Later, when running a report for this same query, both the display logic and the query record logic will apply to display only date variables for original abstractor "Steve." All the user had to do was define one filter that specified edittype = Date and Case 1 abstractor = "Steve."

FILTER QUERY CONSTRUCTION

When using the filter to define a variable, edittype, form, reason to include/exclude and whether to include/exclude adjudicated and/or mismatches, it is possible to create logic conflicts. For example, a query may be created that includes the variable for the abstraction date yet excludes all date variables. Following is a description of the logic for resolving these conflicts. However, by carefully defining the type of filter to be constructed, the user can avoid the common types of conflicts that can occur.

The logic is checked in the following order for each record in the comparison set:

Set DISPLAY=true by default

If there are fieldnames in the filter then

- If include: set DISPLAY=true if variable in list else set DISPLAY=false
- If exclude: set DISPLAY=false if variable in list

If there are edittypes in the filter and DISPLAY=true then

- If include: set DISPLAY=true if edittype in list else set DISPLAY=false
- If exclude: set DISPLAY=false if edittype in list

If there are forms in the filter and DISPLAY=true then

- If include: set DISPLAY=true if form in list else set DISPLAY=false
- If exclude: set DISPLAY=false if form in list

If there are reasons in the filter and DISPLAY=true then

- If include: set DISPLAY=true if reason in list else set DISPLAY=false
- If exclude: set DISPLAY=false if reason in list

If there are adjudicated variables in the filter and DISPLAY=true then

- If include: set DISPLAY=true if adjudication has been done else set DISPLAY=false
- If exclude: set DISPLAY=false if adjudication has been done

If there are mismatched variables in the filter and DISPLAY=true then

- If include: set DISPLAY=true if mismatch and not (adjudicated filter "Exclude" and adjudication has been done) else set DISPLAY=false
- If exclude: set DISPLAY=false if mismatch

If a child to a grid variable is included, then the parent variable to that child (medication or incident counter) will be displayed. This is done because to have a list of grid children variables (for example all of the start/stop dates for a medication) without the context of what they are linked to could lead to confusion in adjudication. This only applies to the display of the comparison set on the main screen.

The screen titles for any screen that has an item displayed are also displayed.

LOAD CASE COMPARISON

The <LOAD> button loads the Match Set for the selected comparison into the spreadsheet area on the screen. Since the program loads a large volume of data, this process may take a few seconds.

To load the **Match Set(s)**, click on the <LOAD> button.

TRACK ADJUDICATION TIME

The adjudication time is now tracked in the MedQuest Quality Program. The current adjudication time can be viewed by clicking on the <DETAIL> button. The adjudication time is incremented only when the user has the comparison set loaded and the status for the comparison set is "In Progress", (i.e., adjudication has been completed for at least one variable). For example, if a comparison set is loaded and the adjudication of a variable is begun, but the <CANCEL> button is selected on the **Adjudicate Cases** screen, the case status remains "Not Started" and the adjudication time will be blank.

The adjudication time is stopped when the comparison set status is marked as "Complete", the <PAUSE> button is selected, or the View Only option is checked. The only exception to this rule is when an adjudication change is made to a completed comparison set. For example, if a detailed explanation is added to a variable explaining why there was a mismatch after the comparison set has been marked as complete, when the **Adjudicate Cases** screen is exited by clicking on the <OK> button, the adjudication time will be incremented by the amount of time it took to complete the adjudication.

COMPARISON SPREADSHEET

Title	Case One	Case Two	Adjudicated	Reason
Arr. date	01/01/1999	01/01/1999		
Arr. time	12:00	12:00		
Demographics2				
Beneficiary Status	Retired Military	Retired Military		
paysource	TriCare Senior Prime	TriCare Senior Prime		
Admission type	Elective	Elective		
Pre-arrival setting	Home	Home		
Flu Variables				
Influenza vaccine prior	Non-specific immunization	Non-specific immunization		
Flu vaccine during admission	Yes	Yes		
Pneumococcal vac. prior	*No	Yes	No	Entry
Pneumococcal vac. during	No	No		
Hx flu vaccine reaction	No	No		
Hx reaction pneumococcal vac	No	Yes		
Hx allergy egg,thimerosal	No	UTD		

After the selected **Match Set** is loaded into the spreadsheet, the entire list of variables and the data for the two abstractions of the selected case will be displayed in the columns Title, Case One, Case Two, Adjudicated, and Reason.

The display is color coded as follows:

- Black** Indicates that the pair of abstracted variables matches.
- Red** Indicates that the pair of abstracted variables does not match.
- Blue** Indicates that the pair of abstracted variables has been adjudicated and an explanation of the discrepancy is given.

The user can browse through all of the variables listed in the spreadsheet by moving the vertical scroll bar or scroll buttons on the right side of the spreadsheet.

A more detailed description of this function is provided in the Adjudicate/Explain Cases section.

COMPARISON STATISTICS

Possible	# Match(%)	(Standard)	(+/- 5%)	(+/- 5%, reason adjusted)
33		32 (97.0%)	32 (97.0%)	32 (97.0%)

After the selected **Match Set** is loaded into the spreadsheet, the statistics for that set are displayed at the bottom of the **IQC Program** screen. These statistical comparisons include the total number of possible matches for comparison and the percentage match for the following three criteria:

- Standard Criteria** This criteria uses the matching rules described in the **Matching and Scoring Rules** section.
- +/- 5% Criteria** This is the same as the standard criteria, except numeric values within +/- 5% of each other are counted as a match.
- +/- 5% Reason Adjusted Criteria** This is the same as the +/- 5% criteria, except that all rows identified as a computer mismatch or a user-defined mismatch by using the Adjudicate/Explain features are counted as a match.

To review the statistical comparisons in detail, click on the <DETAIL> button to display the **Scoring Detail** screen.

Scoring Detail

Scores Detail for:

Scores Case 1 to Case 2				
Possible	# Match(%)	(Standard)	(+/- 5%)	(+/- 5%, reason adjusted)
33	30 (90.9%)		30 (90.9%)	30 (90.9%)

Scores Case 1 to Adjudication				
Possible	# Match(%)	(Standard)	(+/- 5%)	(+/- 5%, reason adjusted)
33	32 (97.0%)		32 (97.0%)	32 (97.0%)

Scores Case 2 to Adjudication				
Possible	# Match(%)	(Standard)	(+/- 5%)	(+/- 5%, reason adjusted)
33	30 (90.9%)		30 (90.9%)	30 (90.9%)

Tracking Detail

Comparison Tracking Data		Archive Tracking Data	
Date comparison run	06/21/1999 1:48:14	Date	
User that ran comparison	ID1	User	
Adjudicate Tracking Data		Status	Not Archived
Date of last activity	06/21/1999 1:52:08		
Last Adjudicator	ID1		
Status	Complete		
Adjudication time	00:01:07		

Save Scores Close

This screen lists the comparison scores for Case 1 to Case 2, Case 1 to Adjudication, and Case 2 to Adjudication. Note that the latter two calculations only display adjustments to the scoring after adjudication has been performed. Until the adjudication is complete, these scores are not representative of the completed scores using the adjudicated values.

After performing adjudication, click on the <RESCORE> button to recalculate the scores for Case 1 to Adjudication and Case 2 to Adjudication. Clicking on the <DETAIL> button will automatically rescore any adjudicated values.

Additional tracking details include:

- Comparison Tracking Data. Includes the date/time the comparison was performed and the user ID.
- Adjudicate Tracking Data. Includes the date/time of the last adjudication activity, the last adjudicator's ID, the status of the adjudication, and the accumulated adjudication time.
- Archive Tracking Data. Includes the date/time of the last archive process, user ID, and status, i.e., not archived or complete. Note that the **Archive** function is accessed through MedQuest. See the Record the Adjudicated Values section for detailed instructions on the archive process.

The user also has the capability to save the scoring values displayed on the **Scoring Detail** screen by clicking on the <SAVE SCORES> button.

NOTE:

The status of the adjudicated data is saved for each comparison set in the XXXIQC_STATUS table (where XXX is the module acronym). When a comparison is performed, the logged in user is saved as the comparison user and the date/time is also saved. When a case is loaded, the adjudication status of the case is checked for the set of records in the grid. If there are no red rows, then the adjudication is considered complete. If there are any blue rows, then the case is in progress. Otherwise the case has not been started for adjudication. If the status of the grid currently loading is different than that saved in the table, the table is updated with the current status and user ID.

Whenever the user enters the adjudication screen and saves the adjudication information, the adjudication status is checked again following the rules described above. If there are any changes, the status is updated and saved to the table. For example, on a typical case set, the first status would be "Not Started." The user would do adjudication on one of the red rows, and when exiting, the case set would have a status of "In Progress." Once the user has adjudicated all of the red rows the status would be "Complete."

View Only

This option allows a selected case from the *Enter a Comparison* list box to only be viewed. The user will not be able to adjudicate or change any data in the selected case. All data entry functions are disabled.

The View Only option is useful when applying different filters to the **Load** function. For example, if the user displayed only the date variables for review, it would be useful to turn on the View Only option. Otherwise, the filtered set may create a new adjudication status that is not correct.

NOTE:

The User ID on the case cannot be changed, the abstraction time will not accumulate, and the adjudication date will not be changed when using this option.

Adjudicate/Explain Case Comparison

Click on the <ADJUDICATE> button to adjudicate the reason for the mismatch between the two cases on a given row for a variable. It is also possible to perform adjudication even if the data for a variable match, since both cases may have incorrect data for the variable. Double clicking on the appropriate row in the spreadsheet can also access this feature. After selecting the correct answer for the variable, select a reason for the adjudication between the two cases for a given variable. See the Adjudicate/Explain Cases section for detailed information.

VIEW CASE COMPARISON NOTES

Click on the <NOTES> button on either the **IQC Program** screen or the **Adjudicate Case** screen to display the **View Case Notes** screen.

The screenshot shows a window titled "View Case Notes". It contains two identical sections. Each section has a label "Notes entered for case=" followed by a text field containing "T1", and "Reab Id=" followed by a text field containing "0" (for the top section) or "A" (for the bottom section). Below each label is a large, empty text area with a vertical scrollbar on the right. At the bottom right of the window is a "Close" button.

This screen displays the name of the case and the reab ID. The user can view any notes that were included for the original and reabstraction cases. Click on the <CLOSE> button to exit this screen.

DELETE CASE COMPARISON

The current MedQuest Quality Program provides the capability to delete a set of case comparisons as follows:

- Specify the comparison set. Indicate the comparison set by clicking on the selected case displayed in the list box below the *Enter Comparison* text box.
- Click on the <DELETE> button.
- Click on the <YES> button in the *Deletion Confirmation* message box to delete the comparison set or the <NO> button to cancel the deletion.

PAUSE CASE ADJUDICATION

Selecting the <PAUSE> button will stop the internal MedQuest Quality clock that keeps track of the amount of time a case has been adjudicated.

Please note that adjudication timing is turned on with the first adjudication or when a comparison set that is marked as "In Progress" is loaded. The adjudication timing is restarted for a completed set if an adjudication change is made, and turned off when the change had been completed. The adjudication timing is also turned off when a case is marked as "Complete" or the comparison set is unloaded.

EXIT BUTTON

Click on one of two available <EXIT> buttons or from the FILE menu select the Exit option to close the MedQuest Quality Program.

PREPARE CASES FOR COMPARISON

This section describes the types of MedQuest Quality comparisons available, how the software performs a comparison, and how the results of the comparison are stored.

TYPES OF ABSTRACTION CASES

Abstraction cases are organized into three groups:

Original Abstraction

The original abstraction case is designated by an identifier "0."

Reabstraction

The secondary abstraction case(s) is designated by user-identified character(s).

Gold Standard Abstraction

The abstraction case specified as the Gold Standard case is designated by a user-identified unique character (the default is "!"). See the **Gold Standard** section for more information.

COMPARISON SCENARIOS

The MedQuest Quality Program is designed to compare two different abstractions of the same medical record. The comparison may be conducted for various scenarios depending on the purpose of the analysis. For example, an Original abstraction can be compared to a Reabstraction or a Gold Standard abstraction can be compared to a Reabstraction, etc.

EXAMPLE:

AL000001 "O" versus AL000001 "A"

Compare the Original abstraction to the Reabstraction "A"

AL000001 "I" versus AL000001 "B"

Compare the Gold Standard abstraction to the Reabstraction "B"

AL000001 "C" versus AL000001 "I"

Compare the Reabstraction "C" to the Gold Standard abstraction

PLAN THE COMPARISON

It is recommended that the user develop a strategy before matching begins on how to perform the matching, especially if the batch comparison mode is desired. This will ensure that the MedQuest Quality Program produces the appropriate results. This is also important with respect to the single comparison mode; if a comparison for two cases already exists and the user elects to perform a single comparison for the same two cases, the existing adjudication information will be overwritten.

If different users are performing different comparisons on different cases in the single comparison mode, the comparison sets will be built properly. However, if several users attempt to compare the same case at the same time, unpredictable results could occur. The MedQuest Quality Program provides a message warning users about this, but it cannot prevent two users from comparing the same two cases at the same time.

NOTE:

An In Use flag has been added to the XXXIQC_STATUS table (where XXX is the module acronym). The In Use field is set with an asterisk (*) when a single comparison is run and reset to blank when the comparison is complete. In addition, when adjudication is being performed on a selected row, that row is set with an asterisk (*) and reset to blank when the adjudication is complete. This allows more than one user to adjudicate the same case while maintaining the integrity of the data.

In the batch mode, only one user should be performing the comparison at a given time. A batch comparison is typically done overnight. If the batch comparison is performed while there are multiple users accessing the IQC database, unpredictable results may occur.

When comparing cases in multi-user mode, one or more records may be skipped during the comparison. If this situation occurs, a warning message will be displayed that the cases need to be compared again. The case where the error occurred will be listed in the IQC.ERR file.

COMPARE CASES (SINGLE)

The **Single Comparison** allows the user to compare the abstraction of one case to another abstraction of the same case regardless of whether the abstractions are completed. This enables the user to perform partial comparisons, for example, to evaluate the effectiveness of an abstractor who is training on a particular screen.

The **Compare** Program creates a **Match Set** as a result of the comparison of the paired abstractions. If a previously created **Match Set** exists for the same two abstractions, the MedQuest Quality Program will prompt the user to verify that the previously created **Match Set** should be overwritten.



If a Match Set is overwritten, all of the adjudication data previously collected for that Match Set would be deleted, including any adjudicated data or explanations of mismatches.

To begin the comparison, select the Compare Cases (Single) option from the COMPARE menu item to display the **Compare Cases (Single)** screen. On this screen, identify the two abstractions of the case to be compared. The screen is divided into two list boxes: *Case One* and *Case Two*.

The **Gold Standard** cases are stored in the same file as the Reabstraction cases. Therefore, selection of the <REAB/GOLD DB> radio button will also enable selection of Gold Standard cases.

Compare Cases (Single)

CASE ONE	CASE TWO
Choose Source <input checked="" type="radio"/> Original DB <input type="radio"/> Reab/Gold DB	Choose Source <input type="radio"/> Original DB <input checked="" type="radio"/> Reab/Gold DB
Enter Case: <input type="text"/> Select	Enter Case: <input type="text"/> Select
<div>T1;0; T2;0; T3;0; T4;0;</div>	<div>T1;A; T2;A; T3;A;</div>
0%	OK Cancel
<input type="checkbox"/> Include Header Variables <input type="checkbox"/> Include Memo/Diagram Variables	

When loading a single comparison, the default values in the *Choose Source* selection boxes are Original DB for Case 1 and Reab/Gold DB for Case 2. A list of cases will be displayed in the appropriate list boxes. When the <ORIGINAL DB> radio button is clicked, the cases with the case identifier "0" (designating the Original case) will appear in the list box. Similarly, when the <REAB/GOLD DB> radio button is clicked, a list of Reabstraction and Gold Standard cases with the user-defined case identifiers will appear in the list box.

The list boxes can contain up to 150 abstraction cases. If the case of interest is out of range, type the desired case name in the *Enter Case* text box to search for it. As each character is typed, a list of cases beginning with the one that matches or is closest to the typed character set will be displayed.

NOTE:

If a filter is selected that defines a specific set of cases, then the list will display all of the cases associated with that filter.

To perform a comparison, select two abstractions (one case from the Case 1 column and the other from the Case 2 column) that have the same case name but different case identifiers.

The user has the option of including Header variables and/or Memo/Diagram variables in the comparison.

The user also has the option of selecting or creating a filter for comparing the cases. The user can click on the <SELECT> button beneath the Case One or Case Two selections. The user can select records by abstractor, reabstraction ID or any other general query that applies to the database being searched.

NOTE:

See the General Filter Tool for Comparisons/Adjudications/Reports section for complete instructions on how to select and create filters.

After two abstractions have been selected, click on the <OK> button to perform the matching. After the comparison has been completed, that comparison set will be automatically loaded when the **Compare Cases (Single)** screen is exited.



Since the Single Comparison program allows the user to compare one abstraction of a case to any other abstraction of the same case, the order of case selection matters.

EXAMPLE:

For two cases--ALTEST01 is the Original abstraction with the identifier "0" and ALTEST01 is the Reabstraction with the identifier "A"-- ALTEST01 "0" (Case 1) can be compared to ALTEST01 "A" (Case 2) and also ALTEST01 "A" (Case 1) can be compared to ALTEST01 "0" (Case 2). The results from these two comparisons will be saved as two different match sets. Since the rationale behind all possible comparisons cannot be fully anticipated, the MedQuest Quality Program provides this flexibility. Please note that both of these match sets would produce the same scoring statistics.

To exit the **Compare Cases (Single)** screen, click on the <CANCEL> button.

COMPARE CASES (BATCH)

The Batch Comparison allows the user to compare a number of cases that have been marked as complete and produce multiple comparison Match Sets at the same time. This function is particularly useful when a large number of comparisons must be generated while users are not performing adjudication.

Compare Cases (Batch)

Data to Compare

☐ Original cases to Reab cases ☐ Reab cases to Original cases
☐ Original cases to Gold cases ☐ Reab cases to Gold cases
☐ Gold cases to Original cases ☐ Gold cases to Reab cases
☐ Reab cases to Reab cases

Enter Gold Standard ID:

Cases to Compare (only those not previously compared)

☒ Cases marked as complete
☐ Cases from list file
 List file format: hcfacntl,1st reabstra, 2nd reabstra one per line
 (example AZ4110000001,0,A)

☐ Custom Filter

Gold Standard Actions

☒ No gold standard case creation
☐ Create gold standard case from reabstraction
☐ Create gold standard case from original

☐ Include Header Variables
☐ Include Memo/Diagram Variables

NOTE: The batch comparison WILL NOT overwrite an existing comparison

All Comparisons
 Current Comparison

Selecting the Batch option from the COMPARE menu item accesses the **Compare Cases (Batch)** screen. The **Batch Comparison** function provides the following options:

DATA TO COMPARE

Data to Compare

☐ Original cases to Reab cases ☐ Reab cases to Original cases
☐ Original cases to Gold cases ☐ Reab cases to Gold cases
☐ Gold cases to Original cases ☐ Gold cases to Reab cases
☐ Reab cases to Reab cases

Enter Gold Standard ID:

The **Data to Compare** function allows the user to determine the type of cases to be compared. From the *Data to Compare* selection box, define the pair of cases by clicking on one of the options: *Original Against Reabstraction*, *Original Against Gold*, *Gold Against Original*, *Gold Against Reabstraction*, *Reabstraction Against Original*, or *Reabstraction Against Gold*. The Gold Standard identifier must also be specified in the *Enter Gold Standard ID* text box.

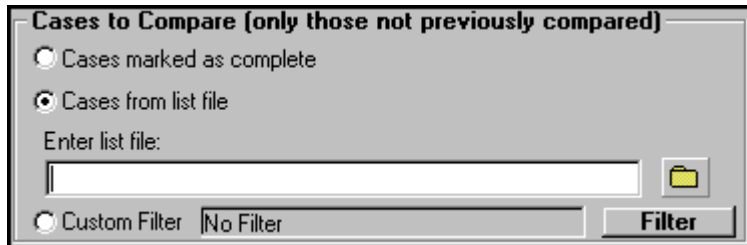
NOTE:

This option will not appear if the *Cases from List File* option is specified in the *Cases to Compare* box.

NOTE:

The user has the option to include Header variables and/or Memo/Diagram variables in the comparison. Check the appropriate boxes to include these variables, *Include Header Variables* or *Include Memo/Diagram Variables*, respectively.

CASES TO COMPARE



The *Cases to Compare* option box identifies whether the batch comparison will take its instructions from the IQC database, from a list of abstraction cases created by the user, or from a filter.

To indicate that the comparisons will take instruction from the IQC database file, select the <CASES MARKED AS COMPLETE> radio button. This option will compare only cases that have been marked as complete or exported. If records already exist in the database for the comparison, the comparison will not occur.

To specify the cases for comparison from an extended list file, click on the <CASES FROM LIST FILE> radio button and enter the list file (and path) after the prompt. The list file must be in the following format:

FORMAT:

CASE NAME, CASE 1 ID, CASE 2 ID

where Case Name is the name uniquely identifying the case.

CASE 1 ID and CASE 2 ID are Case 1 and Case 2 case identifiers, respectively.

A unique character stored in the REABSTRA field identifies each abstraction for a case. The Case 1 ID and the Case 2 ID refer to the value stored in this REABSTRA field. If the Case 1 ID or Case 2 ID value is "0," then the case is considered to be an Original case and the database containing the Original cases will be used. If the Case 1 ID or Case 2 ID value is not "0", then the case is considered to be either a Gold or Reabstraction case and the database containing the Reabstraction cases will be used.

EXAMPLE:

AZ41100000243,0,A (Original-reab "A")

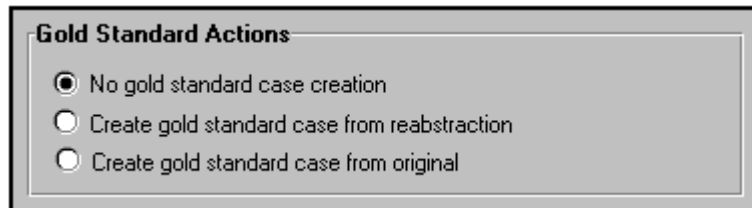
AZ41100000243,0,! (Original-gold "!")

AZ41100000243,! ,A (Gold "!"-reab "A")

If the Cases from List File option is selected, the contents of the Data to Compare box will not be displayed, since the types of data to be compared have been identified as part of the list file.

To indicate that the comparisons will take instruction from a custom filter, click on the <CUSTOM FILTER> radio button and then click on the <FILTER> button to display the **Select Filter** screen. See the General Filter Tool for Comparisons/Adjudications/Reports section for complete instructions on selecting and creating filters.

GOLD STANDARD ACTIONS



The screenshot shows a dialog box titled "Gold Standard Actions". It contains three radio button options: "No gold standard case creation" (which is selected), "Create gold standard case from reabstraction", and "Create gold standard case from original".

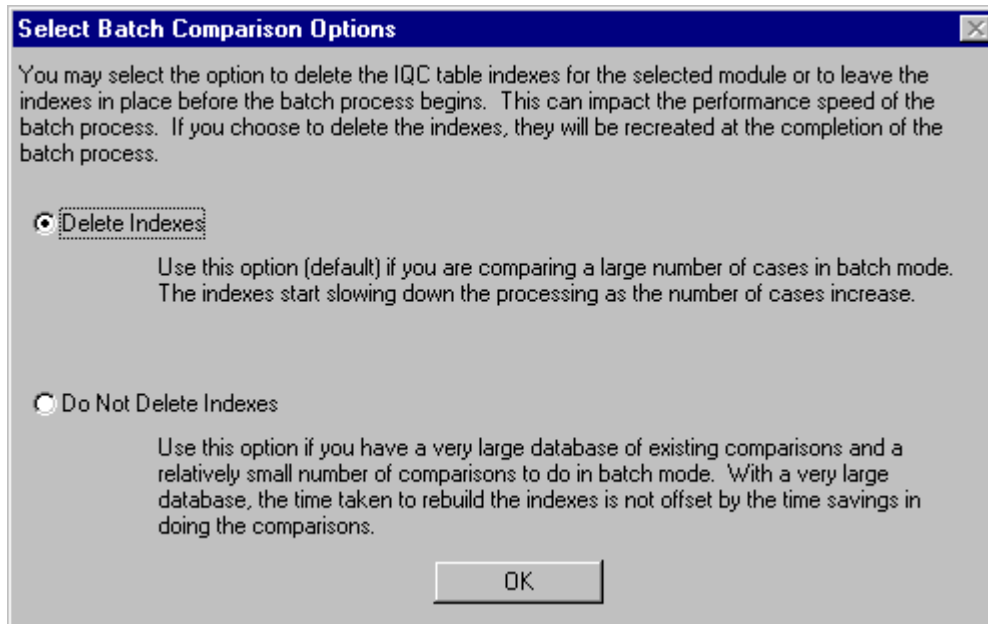
The Gold Standard Actions options allow the user to determine whether to create Gold Standard cases during the batch comparison. The default action is set to not create Gold Standard cases (*No gold standard creation*).

If the Create Gold from Reabstraction option is selected in the *Gold Standard Actions* option box, the user is prompted to enter the reabstraction ID of the case to be copied. If the Create Gold from Original option is selected in the *Gold Standard Actions* option box, the Original case will be copied to create the Gold Standard case.

This function is only available when comparing an Original to a Reabstraction case as defined by selecting the Original Cases to Reab Cases option in the Data to Compare box. The Gold Standard ID entered in the same box is used to create the unique Gold Standard case as well as to identify cases that are not Gold Standard.

This option will not be displayed when either the Original Cases to Gold Cases or Gold Cases to Reab Cases option in the *Data to Compare* box is selected.

PERFORMANCE OPTIONS



To access the **Select Batch Comparison Options** screen, select the <COMPARISON OPTIONS> button on the **Compare Cases (Batch)** screen. This screen enables the user to determine if the indexes on the MedQuest Quality table should be deleted before beginning the batch comparison process. Deleting the indexes will increase the performance significantly, especially when performing a batch comparison of a large number of sets of cases.

However, for a batch compare of a relatively small number of sets of cases, the user may choose not to delete the indexes, especially if the size of the MedQuest Quality database is large. In this situation, performance may increase because the overhead processing time of recreating the indexes is avoided. To select an option, click on the radio button that represents the desired option (i.e., the *Delete Indexes* or the *Do Not Delete Indexes*).

NOTE:

The Delete Indexes option is the default value for the comparison options.

START THE COMPARISON

To begin the abstraction comparison, select the <OK> button on the **Select Batch Comparison Options** screen. If the option to delete the indexes has been chosen, a message box will appear indicating that the indexes for the MedQuest Quality table will be deleted before the comparison starts. To continue, click on the <YES> button. As a set of cases is compared, the "Current Comparison" status bar will display the percent complete. The percent complete for all of the comparisons being processed will also be displayed.

When the **Batch Comparison** is complete, the indexes for the designated MedQuest Quality table are rebuilt (if they were deleted). If the program is abnormally terminated before the indexes are rebuilt, use the Rebuild Indexes option on the FILE menu to rebuild the indexes.

SAVE THE MATCHED DATA

The matched data are saved in the table XXXIQC ("XXX" represents the module name [e.g., CCPIQC]) in the MedQuest Quality database. The table contains records of all the comparison data, including variable names, the value of each variable in Case 1 and Case 2, the variable title, a flag that indicates whether the variable counts towards a comparison, and a flag that indicates whether the values matched. See Appendix A for the listing of all the fields saved in the MedQuest Quality table.

MATCHING AND SCORING RULES

The technical specifications for the matching and scoring for the current MedQuest Quality software are described below:

SINGLE VARIABLE COMPARISON

Each variable for the two cases produces one record. For variables that have only one value (e.g., Temperature on admission), the values are compared to each other. If the values are the same, they are considered a match. Otherwise, they are considered a mismatch.

All Variables If both values are "UTD", those values are considered a match.

Numeric (with units) There are numeric responses for some lab variables that require units. If both numbers are "UTD" or have a "U" embedded in the string signifying undetermined units, it is considered a match.

The denominator is 1 for all variables except variables not touched by the abstractor (i.e., downloaded data, system data) where the denominator is "0."

MULTIPLE ENTRY VARIABLE COMPARISON

MULTIPLE ENTRY VARIABLES (NO RELATED DATA)

For variables that can have more than one value and do not have any other related variables (e.g., a list of medications), the match program compares the two sets of data and lists:

- All variables that have an exact match in Case 1 and Case 2
- All variables that are in Case 1 but not in Case 2
- All variables that are in Case 2 but not in Case 1

EXAMPLE:

- Identify all exact matches on medication trade name.
- Identify all exact matches on medication generic name.
- Remaining mismatches are placed in one of two sets: in Case 1 and not in Case 2, or in Case 2 and not in Case 1.

MULTIPLE ENTRY VARIABLES (RELATED DATA)

For variables that can have multiple values and that have related variables (e.g., a list of antibiotics given during stay with start date and start time), the two sets of data from each case are compared in the following way:

First, all exact matches between variables in a set of linked variables are identified. The two remaining sets are then cycled through to find the highest percentage of partial matches among all members of each linked set. The set with the highest percent of matching elements is then eliminated and the process continues until there are no more "close" matches. The remaining variables in each set are then considered mismatches.

EXAMPLE:

For the variable "CCP medications during hospitalization," if the medication is Aspirin, a start date and a stop date are collected.

- Identify all exact matches where the trade names match and the children variables match (e.g., A.S.A., 01/01/91, 01/04/91 matches A.S.A., 01/01/91, 01/04/91).
- Identify all exact matches where the generic names match and the children variables match (e.g., A.S.A., 01/01/91, XX/XX/XX matches ASPIRIN, 01/01/91, XX/XX/XX).

Identify all partial matches where the key field is a match per the criteria in a, or b, above. (A.S.A., 01/01/91, XX/XX/XX partially matches ASPIRIN, 01/01/91, 01/04/91 based on generic match). Take the best partial match (highest percentage match and greater than 0) and consider it a partial match. Cycle through all combinations of Case 1 and Case 2 sets until all partial matches have been identified.

Remaining mismatches are placed in one of two sets: in Case 1 and not in Case 2, or in Case 2 and not in Case 1. All linked variables remain connected together.

The denominator is 1 for each multiple record created in the MedQuest Quality database.

SCORING RULES

All Variables (UTD or Blank)=(UTD or Blank) or (Value=Value) produces a match=1

ADJUDICATE/EXPLAIN CASES

Once a **Match Set** has been created for a pair of abstractions, the case can then be adjudicated. Paired variables that do not match are displayed in red. After the variable has been adjudicated, it is displayed in blue.

This adjudication/explanation process involves:

- Evaluating each data entry variable to determine the adjudicated value
- Recording the correct value or entering another value if neither of the two is correct
- Selecting a reason for the mismatch
- Entering an explanation for the mismatch

Adjudicate Cases

Variable = Reaction to pneumococcal vaccine prior to arrival

Adjudicate Value

Case one data: UTD

Case two data: No

Adjudicated data:

Case One Case Two Enter Value Clear Value

Reason for Mismatch

- ☒ None
- ☐ Data entry error
- ☐ Information missed
- ☐ Computer mismatch error
- ☐ Poor record copy
- ☐ Unclear element definition
- ☐ Unclear location
- ☐ Not following rules
- ☐ Conflicting information
- ☐ Other

User defined

Explanation for mismatch

Notes Variable Help Screen Help OK Cancel

ENTER THE ADJUDICATED VALUE

The **Adjudicate Cases** screen displays the data values for Case 1 in the *Case One Data* text box and Case 2 in the *Case Two Data* text box and the adjudicated value in the *Adjudicated Data* text box, if previously entered. The **Adjudicate Cases** screen also displays an icon indicating whether the Case 1 and Case 2 values are counted as a match or a mismatch using the criteria described in the Matching and Scoring Rules section.

To enter the adjudicated value for a pair of mismatched variables, double click either on the row targeted for adjudication in the spreadsheet or select a row and click on the <ADJUDICATE> button on the **IQC Program** screen. Record the adjudicated value in one of the following two ways:

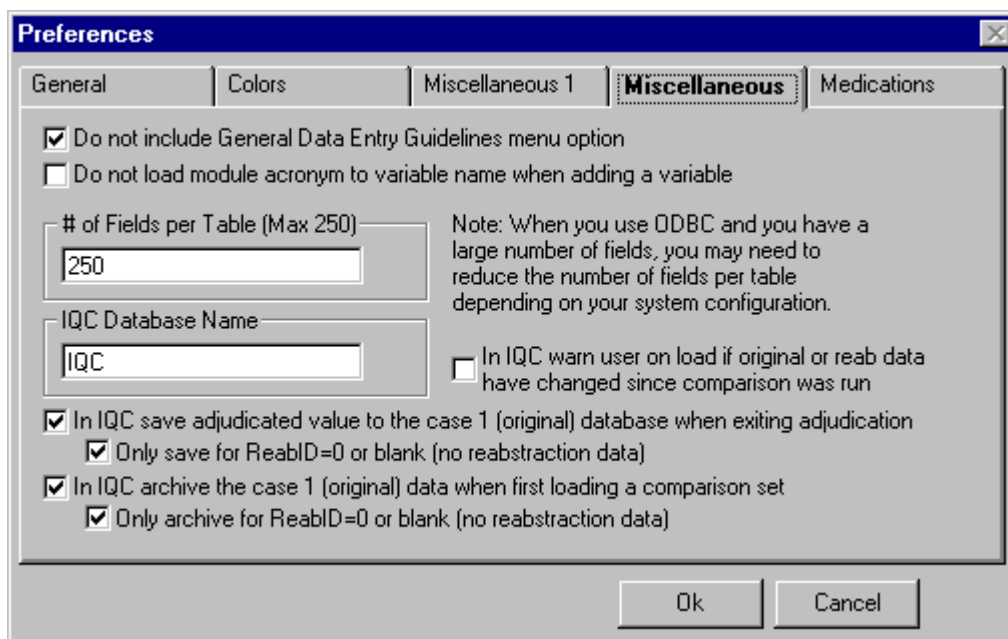
Use the Quick Select Data Buttons. If one of the values entered is correct, select one of the buttons under the *Adjudicated Data* text box to perform a quick adjudication. Click on the <CASE ONE> button if the Case 1 value is determined to be the correct one or the <CASE TWO> button if the Case 2 value is determined to be the correct one. The value of the selected Case will be displayed in the *Adjudication Data* text box. The <CLEAR VALUE> button will clear the adjudicated value if an error is made.

Use the Popup Data Entry Box. If neither value is correct, use the <ENTER VALUE> to enter the correct value. The data entry popup box that appears here is the same one used in MedQuest during quick data entry.

Once the adjudicated value is selected or entered, the MedQuest Quality displays an asterisk (*) next to the correct variable answer indicating the abstractor that entered the correct value. The variable that does not have an asterisk (possibly both, if neither was a correct match) identifies the abstractor that made the data entry error. The adjudicated value is displayed as well as the reason for the adjudication.

RECORD THE ADJUDICATED VALUES

The entry for the adjudicated values can be viewed as a quick way to capture the correct values determined by the analyst. Normally, the adjudicated data are not saved to the module (i.e., original) database. Therefore, it is recommended that the MedQuest data entry be used to perform this update (if required). The MedQuest tool provides the user with the option to save the adjudicated value to the module database for Case 1 when exiting adjudication.



While in the Design function of MedQuest, from the FILE menu select the Preferences option and click on the Miscellaneous 2 tab. Check the *In IQC Save Adjudicated Value to the Case 1 (Original) Database when Exiting Adjudication* check box. This feature will automatically save the adjudicated value to the module database for Case 1. Since the MedQuest Quality gives the user several options for comparing cases, it is recommended that the check box *for Only Save for ReabID=0 or Blank (No Reabstraction Data)* also be selected so that only original data are saved to the module database.

When the adjudicated value is saved, the abstraction time is incremented by one second and the current date is saved to the database. This will verify that the database has been updated.



While in the MedQuest Quality Program, from the **IQC Program** screen the user has the option to deselect this feature. Uncheck the *Adjud. Save* check box to disable this option for the current session.



There is a special rule that is followed for multiples, i.e., medication and incident variables, since these are more complex than single variables. When a change is made to a multiple, the exact record identified as the one most likely associated with the change per the multcnt value in that database (this is the order in which Case 1 multiples are loaded) will be used, if the incident number/medication names are the same as the key field in the comparison database. If for some reason a multcnt/medication name or incident number match cannot be made, then the medication name or incident number will be used to perform the match to save to the correct record. This should result in any unlikely data scenarios where there are duplicate medication names entered.

NOTE:

If this feature is not selected in MedQuest, the *Adjud. Save* check box will not be displayed on the **IQC Program** screen.

Another feature only available from the MedQuest utility is the capability to save the data for Case 1 to an archive database. While in the Design function of MedQuest, from the FILE menu select the Preferences option and click on the Miscellaneous 2 tab. Check the *In IQC Archive the Case 1 (Original) Data when First Loading a Comparison Set* check box. This feature will automatically save the original values to an archive database for Case 1. Since the MedQuest Quality gives the user several options for comparing cases, it is recommended that the check box for *Only Archive for ReabID=0 or Blank (No Reabstraction Data)* also be selected so that only original data are saved to the module database. If an archive database does not exist for a module with this selected feature, the MedQuest Quality will create it the first time the module is loaded into the program.

ADJUDICATION STATUS

The MedQuest Quality saves the status of adjudication for each comparison set in the XXXIQC_STATUS table (where XXX is the module acronym). When a comparison is run, the currently logged in user's ID is saved as the comparison user as well as the date and time of the comparison. When a case is loaded, the adjudication status of the case is checked for the set of records in the grid. If there are no red rows, then the adjudication is considered complete. If there are any blue rows, then the case is still in progress. Otherwise the case has not been started for adjudication. If the status for the grid currently loading is different than that saved in the table, then the table is updated with the current status and user ID.

Whenever the user enters the adjudication screen and saves the adjudication information, the adjudication status is checked against the above rules. If there are any changes, then the correct status is saved to the table. In this way, on a typical case set the first status would be "Not Started." The user would perform adjudication on one of the red rows and, when exiting, the case set would have a status of "In Progress." Once the user has adjudicated all of the red rows then the status would be "Complete."

IN IQC WARN USER ON LOAD IF ORIGINAL OR REAB DATA HAVE CHANGED SINCE COMPARISON WAS RUN

This feature is only available from the MedQuest utility. While in the Design function of MedQuest, from the FILE menu select the Preferences option and click on the Miscellaneous 2 tab. Check the *In IQC Warn User on Load if Original or Reab Data Have Changed Since Comparison Was Run* check box. This feature will automatically detect if there were any changes to the data for the comparison set being loaded since a comparison was run. This option checks the abstraction date, abstractor ID, and review time in the IQC database and in both the Case 1 and Case 2 databases to determine if they have changed.

NOTE:

This option should not be used when saving the adjudicated values to the Case 1 database since the Case 1 database is changed every time adjudication is performed and the warning will constantly be displayed.



While in the MedQuest Quality Program, from the **IQC Program** screen the user has the option to deselect this feature. Uncheck the *Load Warn* check box to disable this option. If this option is unchecked, it will only be disabled for the current MedQuest Quality session.

NOTE:

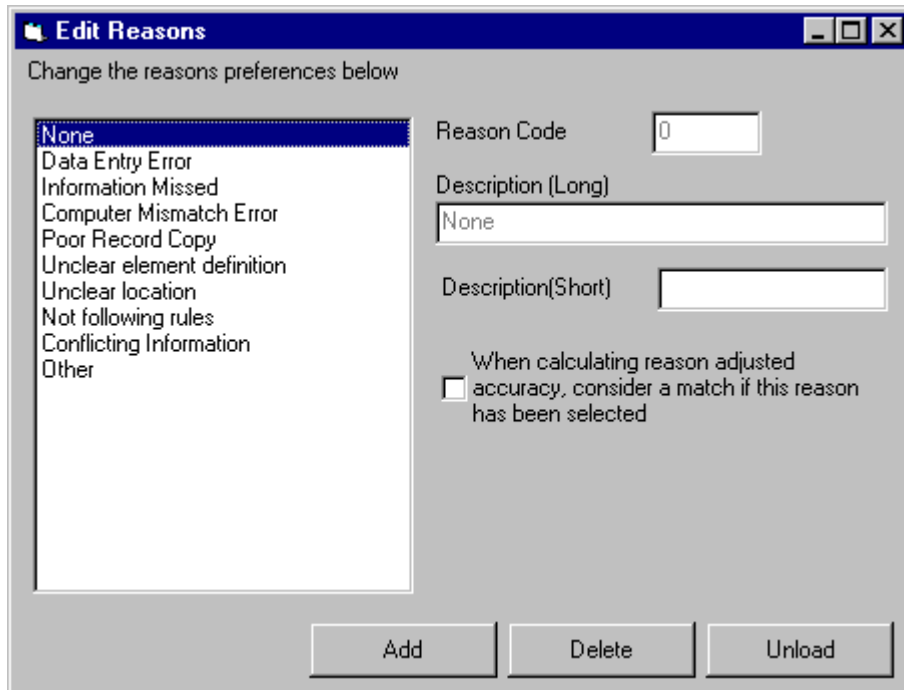
If this feature is not selected in MedQuest, the *Load Warn* check box will not be displayed on the **IQC Program** screen.

EXPLAIN THE ADJUDICATED VALUE

To explain the reason for a mismatch between the two cases, from the *Reason for Mismatch* section click on the appropriate radio button or from the *User Defined* section highlight the appropriate reason. There is also a section for explaining the reason for the mismatch. In the *Explanation for Mismatch* section, type in the desired explanation. Directions for creating user-defined mismatches are described below.

USER-DEFINED MISMATCHES

From the PREFERENCES menu on the **IQC Program** screen, select the Edit Reasons List option to display the Edit Reasons screen.



The user has the capability to add user-defined reasons to the *User Defined* section. Click on the <ADD> button to display a popup box to enter the long description for the reason (up to 30 characters). This description must be unique. The long description is displayed during adjudication. Click on the <OK> button to save the reason description or the <CANCEL> button to cancel the reason description.

After clicking on the <OK> button, highlight the new reason and enter a short description (up to 10 characters) that will be displayed on the comparison spreadsheet. The user also has the ability to select an option that will count this reason as a match when calculating reason adjusted accuracy. Highlight a reason from the reasons list, i.e., default or user defined, and check the *When Calculating Reason Adjusted Accuracy, Consider a Match if This Reason Has Been Selected* check box.

NOTE:

This information is saved in the Reasons table and as such will apply to all IQC module tables loaded in that IQC database. If this type of change is made in the Reasons table, that change will apply to all calculations performed thereafter.

Assign a two character Reason Code to the newly added reason. Note that the reason codes assigned to the default reasons cannot be edited.

To delete a user-defined reason, highlight the user-defined reason and click on the <DELETE> button. A warning message will ask the user to verify the deletion.

The default reasons from the *Reason for Mismatch* section on the **Adjudicate Cases** screen only permit editing the short description and provide the option to count this reason as a match when calculating reason adjusted accuracy. The default reasons cannot be deleted.

NOTE:

The default reason *Computer Mismatch Error* is currently counted as a match. However, this option can be edited.

Clicking on the <UNLOAD> button to exit the **Edit Reasons List** function, will save any edits or additions.

The MedQuest Quality provides the user with the ability to select more than one record in the comparison grid by holding down the <SHIFT> key and clicking on the desired rows or by dragging the mouse across the desired rows while holding down the <SHIFT> key. Microsoft calls this an "Extended Select." If more than one record is selected in the grid for adjudication, the user will only be presented with the option to select a reason code and/or explanation for the mismatch for the highlighted records. The selected reason and/or explanation will be applied to all of the selected records. This feature gives the user the flexibility to assign the same reason code (and/or explanatory note) to a group of medication/incident grid variables.

VIEW NOTES

Click on the <NOTES> button on either the **IQC Program** screen or the **Adjudicate Case** screen to display the **View Case Notes** screen.

The screenshot shows a software window titled "View Case Notes". Inside the window, there are two identical data entry sections. The top section has a header "Notes entered for case=" followed by "T1" and "Reab Id=" followed by "0". Below this header is a large, empty text box with a vertical scrollbar on the right. The bottom section has a header "Notes entered for case=" followed by "T1" and "Reab Id=" followed by "A". Below this header is another large, empty text box with a vertical scrollbar on the right. At the bottom right of the window, there is a button labeled "Close".

This screen displays the name of the case and the reab ID. The user can view any notes that were entered for the original and reabstraction cases. Click on the <CLOSE> button to exit this screen.

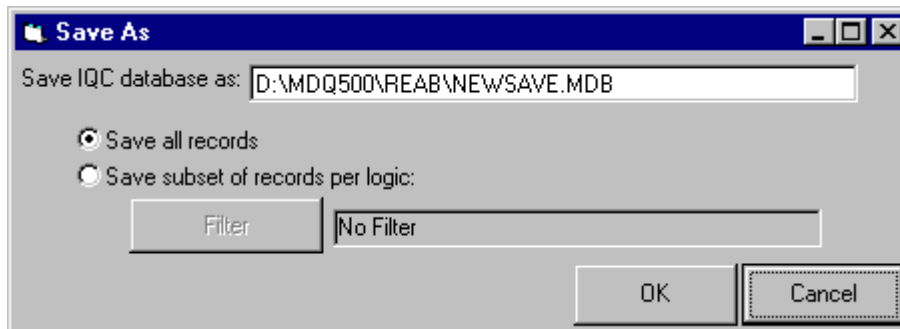
ACCESS VARIABLE/SCREEN HELP

For assistance in performing the adjudication, click on one of the two buttons, <VARIABLE HELP> or <SCREEN HELP>, to access the context-sensitive screen or variable help information. This is the same help information provided in the module. The variable help displays the help for an individual variable, and the screen help displays the help for the screen on which the variable resides.

EXIT THE ADJUDICATION/EXPLANATION

Once the adjudication is completed, click on the <OK> button to exit the **Adjudicate Cases** screen. To undo any changes made during the adjudication, select the <CANCEL> button.

SAVE AS



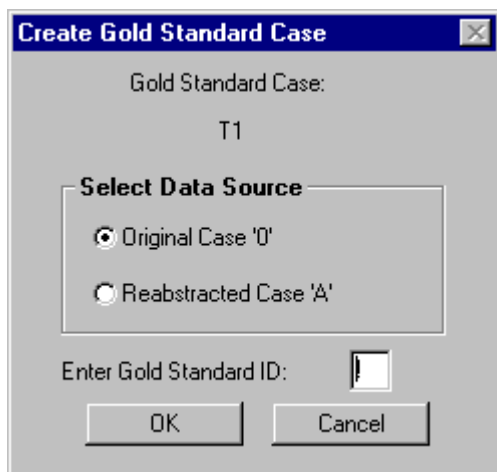
The MedQuest Quality has the capability to save the current IQC database as another IQC database. On the main **IQC Program** screen, select the Save As option from the FILE menu item. The user can choose to save all of the records or use the filter logic to build a query that selects a subset of records to save. See the General Filter Tool for Comparisons/Adjudications/Reports section for complete instructions on how to use filters.

CREATE GOLD STANDARD CASE

A Gold Standard case is used to measure other abstraction cases.

Since different sites have different needs for using the Gold Standard cases, the MedQuest Quality Program has been designed to provide the flexibility to create as many Gold Standard cases as needed for each unique case identified by a Control Number.

To create a Gold Standard case, select the Create Gold Standard Case option from the FILE menu item on the **IQC Program** screen. A **Create Gold Standard Case** window will appear. This window will appear only when a **Match Set** has been selected in the *Enter a Comparison* box on the **IQC Program** screen.



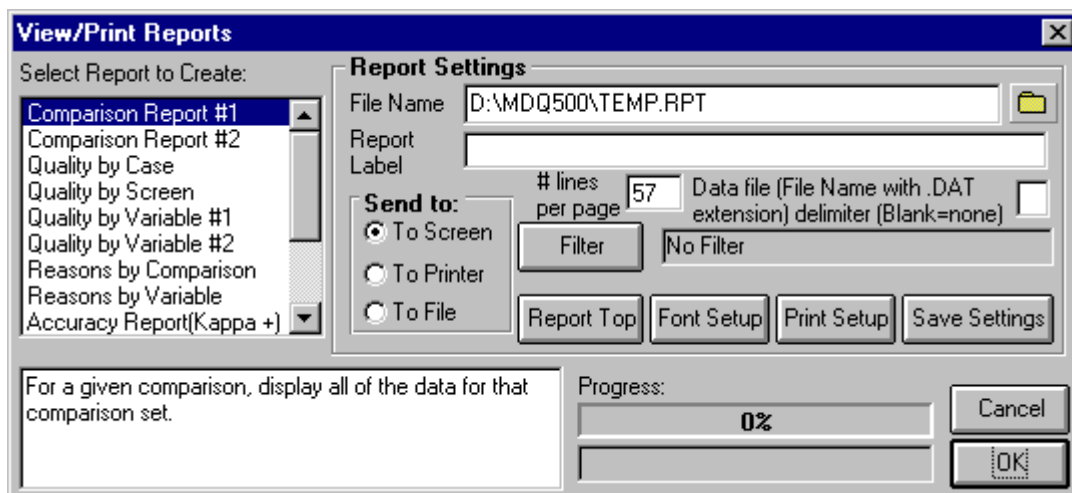
The Gold Standard case can be selected from the *Select Data Source* box on the **Create Gold Standard Case** screen. Click on the radio button that represents the abstraction to be designate as the Gold Standard case from the two abstractions displayed on the **IQC Program** screen.

After selecting a case, designate a Gold Standard identifier by entering a character in the *Enter Gold Standard ID* text box. It is recommended a unique character such as "!" be used to designate the Gold Standard case. Whichever character is selected, it must be used to represent Gold Standard cases throughout the project. This is intended to prevent possible confusion between the Gold Standard and Reabstraction cases.

After the abstraction and the identifier are selected, click on the <OK> button to begin creating the Gold Standard case. The MedQuest Quality Program will copy the entire contents of the selected case to the **.REAB** directory of the module database and designate it with the single unique character that was selected.

VIEW/PRINT REPORTS

The current MedQuest Quality Program provides 14 reports to assist the user in performing basic analyses. To perform more extensive analyses, export the IQC database tables to another database or text format using the export function available in Microsoft Access.



Before generating a MedQuest Quality Report, follow the instructions below:

- **Choose the Report Option.** Choose the Report option from the FILE menu on the **IQC Program** screen to display the **View/Print Reports** screen.
- **Select a Report.** From the **View/Print Reports** screen, select a report from the *Select Report to Create* list box by highlighting the desired report. A description of the highlighted report will appear in the text box just below the list box.
- **Indicate the Report Filename and Destination.** In the *File Name* text box, indicate the path and file name to which the MedQuest Quality Report will be written. Unless a filename is entered, the MedQuest Quality Program defaults to the current directory and filename TMP.RPT.
- **Enter the Report Label (Optional).** Enter the report label in the *Enter Report Label* text box.
- **Specify the Report Location.** Specify one of the following report destinations:
 - **To Screen.** View the MedQuest Quality Report on the screen and send it to the file indicated by clicking on the <TO SCREEN> radio button.
 - **To Printer.** Send the MedQuest Quality Report to both the printer and to the file indicated by clicking on the <TO PRINTER> radio button.
 - **To File.** Send the MedQuest Quality Report to the file indicated by clicking on the <TO FILE> radio button.
- **Specify the Number of Lines per Page.** Specify the number of lines that will appear on a given page in a report by typing the value in the *Number Lines per Page* text box.
- **Specify the Data File Delimiter (Optional).** Specify the data file delimiter. Parameters are set that tell the report what kind of delimiter to use when reading the file and determining where the data elements begin and end. Comma, tab, semicolon and space are the most common delimiters. However, any alphanumeric character can be used.

NOTE:

When using a delimiter, a data file (i.e., file name with .DAT extension) is produced. This type of file is easier to import into Excel (or other similar tools) than a regular text file (i.e., file name with .TXT extension).

- **Specify Filter.** Click on the <FILTER> button to display the **Select Filter** screen. Select the desired filter or create/edit an existing filter. Clicking on the <OK> button will save the filter for the report, while clicking on the <CANCEL> button will cancel the filter. See the General Filter Tool for Comparisons/Adjudications/Reports section for complete instructions on how to use filters.
- **Design Report Header.** By clicking on the <REPORT TOP> button, the user can design the data that will appear in the header for the selected report. Several reports have default header parameters; however, these can be customized to the user's specific needs.

Report Header Screen

Design the data below that will appear in the report header for the selected report

Column 1		Column 2	
	V+		V+
	V+		V+
	V+		V+
	V+		V+
	V+		V+
	V+		V+
	V+		V+
	V+		V+
	V+		V+
	V+		V+
	V+		V+
	V+		V+
	V+		V+

You have 12 rows and 2 columns per row of data you can enter in your report header. For each row/column you can enter a label on the left hand side (example: Discharge date=) and a variable (if applicable) on the right (example VAR=DISDATE). If you do not enter a variable, then the user will be prompted to enter values upon loading the report.

Clear OK Cancel

The user can define up to 12 rows with two columns to print in the header. Each column has a left and right side. The left column is used as a label, i.e., Discharge Date, and the right column is used to display the desired information, i.e., 05/05/1998 (Variable = DISDATE). For example, the user may want a header that displays the following information:

Abstractor Name: John Smith

Abstraction Date: 01/01/1991

Or:

Date from 01/01/1991 to 01/02/1991

In each of these cases, the user designs the template by entering text into the desired number of rows. For reports where a case can be selected, the user has the ability to assign a variable to the right side of each column by clicking on the <V+> (i.e., add variable) button. In this case, the data produced in the header on the report will display that variable's value from the Case 1 abstraction. Clicking on the <CLEAR> button will delete any data entered into the template.

After completing the template, click on the <OK> button to save the edits or the <CANCEL> button to exit the **Report Header Screen** and cancel the edits. When selecting the report, the header template will appear if the user is required to enter any data when the value is not defined by a variable. The user can enter the information required by the header and then click on the <OK> button to continue. When the report is produced, the data displayed/entered in the template screen will appear at the top of each report.

- **Specify the Font.** Change the default printer font type by clicking on the button and selecting the font type, style, and size.
- **Setup the Printer.** Reset the printer configuration by pressing the <PRINT SETUP> button to display the **Printer Settings** screen. The user can define the number of copies to print, select Landscape or Portrait style, and select the printer.

- **Save the Settings.** By clicking on the <SAVE SETTINGS> button, all of the report settings (described above) that were entered for the selected report will be saved. The settings are saved to the MDQPARAM.INI file in the Windows directory. Each time this report is selected, the saved settings are loaded. If no settings are found, the current default settings are used.

NOTE:

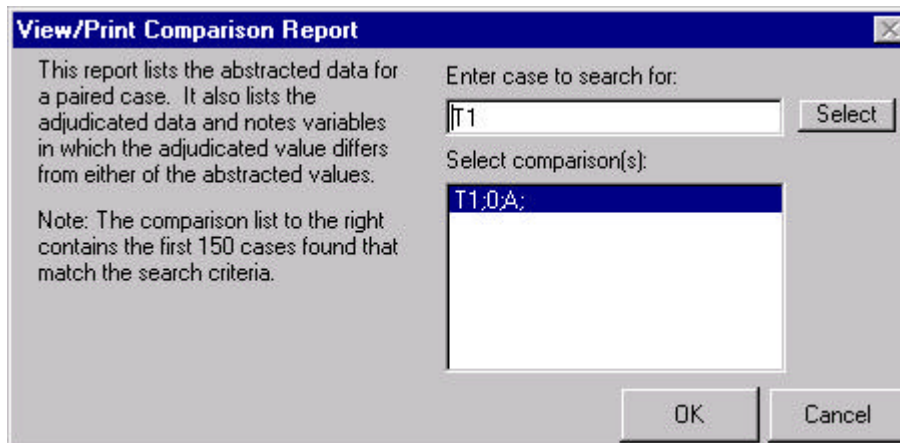
To set global Printer Setting options, i.e., legal size paper, from the FILE menu on the main **IQC Program** screen, select the Setup Printer option and enter the desired settings. This will override only the printer settings (if defined and saved) for each individual report.

The MedQuest Quality Reports option provides fourteen types of reports:

- Comparison Report #1
- Comparison Report #2
- Quality by Case
- Quality by Screen
- Quality by Variable #1
- Quality by Variable #2
- Reasons by Comparison
- Reasons by Variable
- Accuracy Report (Kappa +)
- Adjud./Reason Internal
- Adjud./Reason Facility
- Abstractor by Case
- Abstractor by Variable
- Abstractor Summary

VIEW/PRINT COMPARISON REPORT #1

This report shows abstracted values for a selected comparison or set of comparisons. For each pair of abstractions, the report lists every variable and the abstracted values for the selected pair of cases, as well as the adjudicated value, when applicable. An asterisk indicates an adjudicated value that is different from both abstracted values. The report displays numeric values in their abstracted form without text labels (i.e., option variables).



This report is generally produced when the adjudication has been completed and is used for updating the values in the Gold Standard case in the module.

To specify the criteria, select the **Match Set** (or Match Sets) from the list shown in the *Selected Comparison(s)* list box. Click on the <OK> button to begin generating the report or click on the <CANCEL> button to exit the **View/Print Comparison Report #1** screen without generating the report.

Example of the Comparison Report #1:

IQC Data Report: Comparison Report #1

Produced: 06/25/1999 12:58:47 PM

Label:

Filter: No Filter

HCFA Control: T2

Case One ID: 0

Case Two ID: A

* : * = Adjudicated value <> abstracted value

\$ = data1/2 mismatch and adjudicated value = abstracted value

! = data1/2 mismatch and no adjudicated value

A : Denom count

B : Match count

C : Parent variable

D : Child variable

E : Multiple

» = Multiple option variable

Variables	Data 1	Data 2	*	Adjudicated Value	Fieldname	A	B	C	D	E
PRN					PRN	0	0			
SPONSS					SPONSSN	0	0			
N										
FMP					FMP	0	0			
RECAGE					RECAGE	0	0			
SEX					BPXSSEX	0	0			

Summary Statistics:

Possible Matches	33
Total # match (Standard)	33
% match (Standard)	100.0%
Total # match (+/- 5%)	33
% match (+/- 5%)	100.0%
Total # match (+/- 5%, reason adjusted)	33
% match (+/- 5%, reason adjusted)	100.0%

VIEW/PRINT COMPARISON REPORT #2

This report shows abstracted values for a selected comparison or set of comparisons. For each pair of abstractions, the report lists every variable and the abstracted values of the selected pair of cases, and the adjudicated value, when applicable, as well as the reason for the adjudication. An asterisk indicates an adjudicated value that is different from both abstracted values.

View/Print Comparison Report

This report lists the abstracted data for a paired case. It also lists the adjudicated data and notes variables in which the adjudicated value differs from either of the abstracted values.

Note: The comparison list to the right contains the first 150 cases found that match the search criteria.

Enter case to search for:

Select comparison(s):

This report is generally produced when the adjudication has been completed and is used for updating the values in the Gold Standard case in the module.

To specify the criteria, select the **Match Set** (or Match Sets) from the list shown in the *Selected Comparison(s)* list box. Click on the <OK> button to begin generating the report or click on the <CANCEL> button to exit the **View/Print Comparison Report #2** screen without generating the report.

Example of the Comparison Report #2:

IQC Data Report: Comparison Report #2

Produced: 06/25/1999 12:59:03 PM

Label:

Filter: No Filter

Chart ID: T2, 0, A

Abstractor A:ID1

Abstractor B:ID1

Screen Set Name: General

Screen Name: Flu Variables

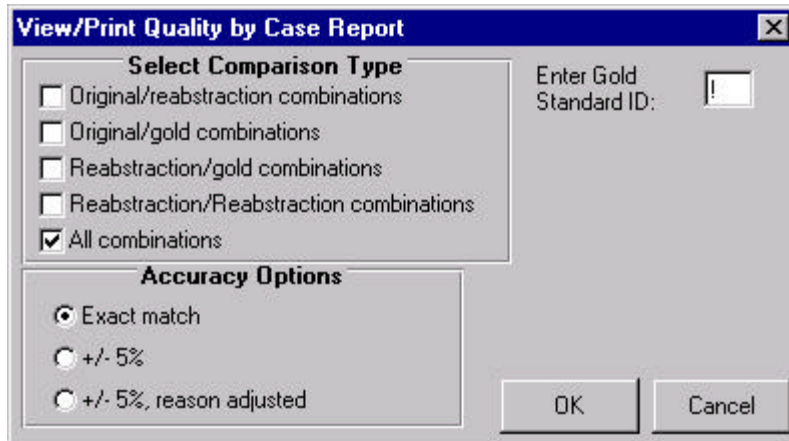
Fieldtitle	Fieldname	Type of Field	Abstractor A	Abstractor B	Mismatch	Adjud. Value	Reason
Influenza vaccine prior	FLUPRIOR	Option (Pick One)	No	No			
Flu vaccine during adm	FLUDUR	Option (Pick one)	No	No			
Pneumo coccal vac prior	FLUPNPRI	Option (Pick one)	No	No			
Pneumo coccal vac during	FLUPNDUR	Option (Pick one)	No	No			

Summary Statistics:

Standard	+/- 5%	+/- 5%	Reason Adjusted
Possible	33	33	33
Matches	33	33	33
Percent	100.0%	100.0%	100.0%

VIEW/PRINT QUALITY BY CASE REPORT

This report calculates the overall accuracy rate for each **Match Set** of a given case. It lists the accuracy for each pair of abstractions line by line and then lists the overall case accuracy average rate based on the scoring of all the pairs.



Before generating the report the following criteria must be specified:

- **Comparison Type.** Indicate the comparison type by selecting one or more check boxes that represent the comparison type of interest from the *Select Comparison Type* selection box. The comparison types include: *Original/Reabstraction Combinations*, *Original/Gold Standard Combinations*, *Reabstraction/Gold Standard Combinations*, *Reabstraction/Reabstraction Combinations*, and *All Combinations*. Select any or all of the first four types; note that selecting *All Combinations* automatically includes all of the options. If the Gold Standard is included in the selections, the Gold Standard ID must be provided in the *Enter Gold Standard ID* text box.
- **Accuracy Options.** Select the accuracy option by clicking on the radio button that represents the option of interest. The three possible accuracy options that can be selected include: *Exact match*; *+/- 5%*; and *+/- 5%, reason adjusted*.

Click on the <OK> button to begin generating the report or click on the <CANCEL> button to exit the **View/Print Quality by Case Report** screen without generating the report.

Example of the Quality by Case Report:

IQC Data Report: Quality by Case
Produced: 06/25/1999 12:59:20 PM
Label:
Filter: No Filter
Options:
Comparison Type:
All combinations
Accuracy: Exact Match

HC	FACNTL	#1	#2	Denom	Match	Match Rate
1	T1	0	A	33	32	0.97
2	T2	0	A	33	33	1.00
3	T3	0	A	33	30	0.91
4	T4	0	A	33	26	0.79
Totals / Avg of Match Rates:				132	121	0.92

VIEW/PRINT QUALITY BY SCREEN REPORT

This report calculates the percentage accuracy rate (on the selected screen) for each **Match Set** of a given case. It lists the accuracy for each abstraction pair and the overall average of the case accuracy rate based on the scoring from all the pairs.

Before generating the report, the following criteria must be specified:

- **Comparison Type.** Indicate the comparison type by selecting one or more of the check boxes that represent the comparison type of interest from the *Select Comparison Type* selection box. The comparison types include: *Original/Reabstraction Combinations*, *Original/Gold Standard Combinations*, *Reabstraction/Gold Standard Combinations*, *Reabstraction/Reabstraction Combinations*, and *All Combinations*. Any or all of the first four types can be selected; selecting *All Combinations* automatically includes all of the options. If the Gold Standard is included in the selections, the Gold Standard ID must be provided in the *Enter Gold Standard ID* text box.
- **Accuracy Options.** Select the accuracy option by clicking on the radio button that represents the option of interest. The three possible accuracy options that can be selected include: *Exact match*; *+/- 5%*; and *+/- 5%, reason adjusted*.
- **Data Entry Screens.** Select one or more data entry screens to be evaluated from the list displayed in the *Select a Form* list box. To select more than one screen, click on the screen of interest and hold down the <SHIFT> key until the last screen of interest is reached or use the <SELECT ALL> and <DESELECT ALL> buttons.

Click on the <OK> button to begin generating the report or click on the <CANCEL> button to exit the **View/Print Quality by Screen Report** screen without generating the report.

Example of the Quality by Screen Report:

IQC Data Report: Quality by Screen

Produced: 06/25/1999 12:59:37 PM

Label:

Filter: No Filter

Options:

Comparison Type:

All combinations

Accuracy: Exact Match

Screen: DEM

HCFACTL	#1	#2	Denom Match		Match Rate
1 T1	0	A	15	14	0.93
2 T2	0	A	15	15	1.00
3 T3	0	A	15	15	1.00
4 T4	0	A	15	15	1.00
Totals / Avg of Match Rates:			60	59	0.98

Screen: FLU

HCFACTL	#1	#2	Denom Match		Match Rate
1 T1	0	A	13	13	1.00
2 T2	0	A	13	13	1.00
3 T3	0	A	13	10	0.77
4 T4	0	A	13	7	0.54
Totals / Avg of Match Rates:			52	43	0.83

VIEW/PRINT QUALITY BY VARIABLE REPORT #1

This report provides a breakdown of the percent of matching values by variable grouped by data entry screen.

View/Print Quality by Variable Report

Select Comparison Type

- ☐ Original/reabstraction combinations
- ☐ Original/gold combinations
- ☐ Reabstraction/gold combinations
- ☐ Reabstraction/Reabstraction combinations
- ☒ All combinations

Accuracy Options

- ☒ Exact match
- ☐ +/- 5%
- ☐ +/- 5%, reason adjusted

Enter Gold Standard ID:

Select screen(s)

- Demographics1(demgen1)
- Demographics2(demgen2)
- Flu Variables(flu)
- Discharge(disch)

Select All Deselect All

OK Cancel

Before generating the report, the following criteria must be specified:

- **Comparison Type.** Indicate the comparison type by selecting one or more of the check boxes that represent the comparison type of interest from the *Select Comparison Type* selection box. The comparison types include: *Original/Reabstraction Combinations*, *Original/Gold Standard Combinations*, *Reabstraction/Gold Standard Combinations*, *Reabstraction/Reabstraction Combinations*, and *All Combinations*. Any or all of the first four types can be selected; selecting *All Combinations* automatically includes all of the options. If the Gold Standard is included in the selections, the Gold Standard ID must be provided in the *Enter Gold Standard ID* text box.
- **Accuracy Options.** Select the accuracy option by clicking on the radio button that represents the option of interest. The three possible accuracy options that can be select include: Exact match; +/- 5%; and +/- 5%, reason adjusted.
- **Data Entry Screens.** Select one or more data entry screens containing the variables to be evaluated from the list displayed in the *Select a Form* list box. To select more than one screen, click on the screen of interest and hold down the <SHIFT> key until the last screen of interest is reached or use the <SELECT ALL> and <DESELECT ALL> buttons.

Click on the <OK> button to begin generating the report or click on the <CANCEL> button to exit the **View/Print Quality by Variable Report #1** without generating the report.

Example of the Quality by Variable Report #1:

IQC Data Report: Quality by Variable #1

Produced: 06/22/1999 2:18:35 PM

Label:

Filter: No Filter

Options:

Comparison Type: All combinations

Accuracy: Exact Match

A= Total number of cases abstracted by variable

B= Total denominator

C= Total matches

D= Total average (Total match/Total denom)

E= Case adjusted average (for multiple variables)

Screen: Demographics1

Fieldname	Variable Title	A	B	C	D	E
BPLFMP	FMP	3	3	3	1.00	1.00
BPLSPN	SPNSSN	3	3	3	1.00	1.00
BPXCOR	BPXCOR	3	3	3	1.00	1.00
BPXFMADM	ADMDATE	3	3	3	1.00	1.00

VIEW/PRINT QUALITY BY VARIABLE REPORT #2

This report provides a breakdown by variable of the possible matches and percentages grouped by data entry screen.

View/Print Quality by Variable Report

Select Comparison Type

- ☐ Original/reabstraction combinations
- ☐ Original/gold combinations
- ☐ Reabstraction/gold combinations
- ☐ Reabstraction/Reabstraction combinations
- ☒ All combinations

Accuracy Options

- ☒ Exact match
- ☐ +/- 5%
- ☐ +/- 5%, reason adjusted

Enter Gold Standard ID:

Threshold for accuracy:

Select screen(s)

- Demographics1(demgen1)
- Demographics2(demgen2)
- Flu Variables(flu)
- Discharge(disch)

Select All Deselect All

OK Cancel

Before generating the report, the following criteria must be specified:

- **Comparison Type.** Indicate the comparison type by selecting one or more of the check boxes that represent the comparison type of interest from the *Select Comparison Type* selection box. The comparison types include: *Original/Reabstraction Combinations*, *Original/Gold Standard Combinations*, *Reabstraction/Gold Standard Combinations*, *Reabstraction/Reabstraction Combinations*, and *All Combinations*. Any or all of the first four types can be selected; selecting *All Combinations* automatically includes all of the options. If the Gold Standard is included in the selections, the Gold Standard ID must be provided in the *Enter Gold Standard ID* text box.
- **Accuracy Options.** Select the accuracy option by clicking on the radio button that represents the option of interest. The three possible accuracy options that can be select include: Exact match; +/- 5%; and +/- 5%, reason adjusted.
- **Data Entry Screens.** Select one or more data entry screens containing the variables to be evaluated from the list displayed in the *Select a Form* list box. To select more than one screen, click on the screen of interest and hold down the <SHIFT> key until the last screen of interest is reached or use the <SELECT ALL> and <DESELECT ALL> buttons.
- **Threshold for Accuracy.** By entering a percentage amount between 0 and 100, only percentages at or below the designated amount will be displayed. If a percentage is not entered, the report defaults to 100%.

Click on the <OK> button to begin generating the report or click on the <CANCEL> button to exit the **View/Print Quality by Variable Report #2** screen without generating the report.

Example of the Quality by Variable Report #2:

IQC Data Report: Quality by Variable #2

Produced: 06/22/1999 2:18:47 PM

Label:

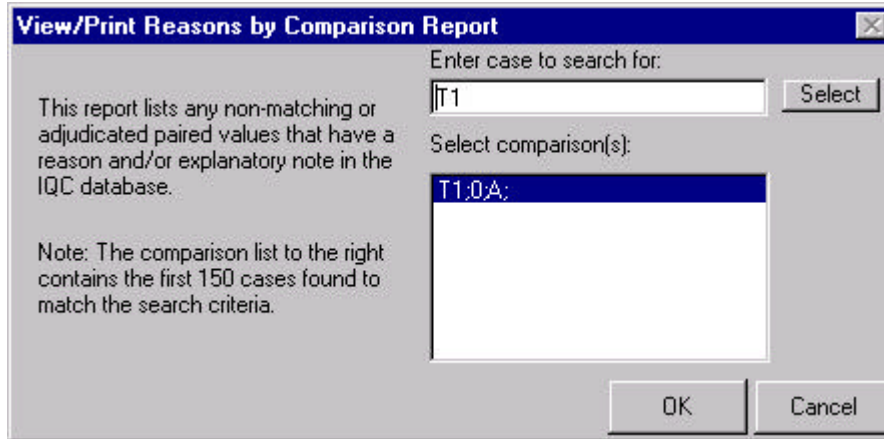
Filter: No Filter

Screen: Demographics1

Variable Name	Items	Matches	Percent
FMP	3	3	100.00%
SPNSSN	3	3	100.00%
BPXCOR	3	2	66.67%
ADMDATE	3	3	100.00%

VIEW/PRINT REASONS BY COMPARISON REPORT

This report lists the detailed explanations for mismatches for each variable in an individual case.



To specify the criteria, select the **Match Set** (or Match Sets) from the list shown in the *Selected Comparison(s)* list box. Click on the <OK> button to generate the report or click on the <CANCEL> button to exit the **View/Print Reasons by Comparison Report** screen without generating the report.

Example of the Reasons by Comparison Report:

IQC Case Report: Adjudicated Variables, Additional Information

Produced: 06/25/1999 3:05:45 PM

Label:

Filter: No Filter

HCFA Control: T4

Case One ID: 0

Case Two ID: A

» = multiple option variable

Fieldname: MTFPSP

Field title: paysource

Original value: 5

Reabstracted value: 3

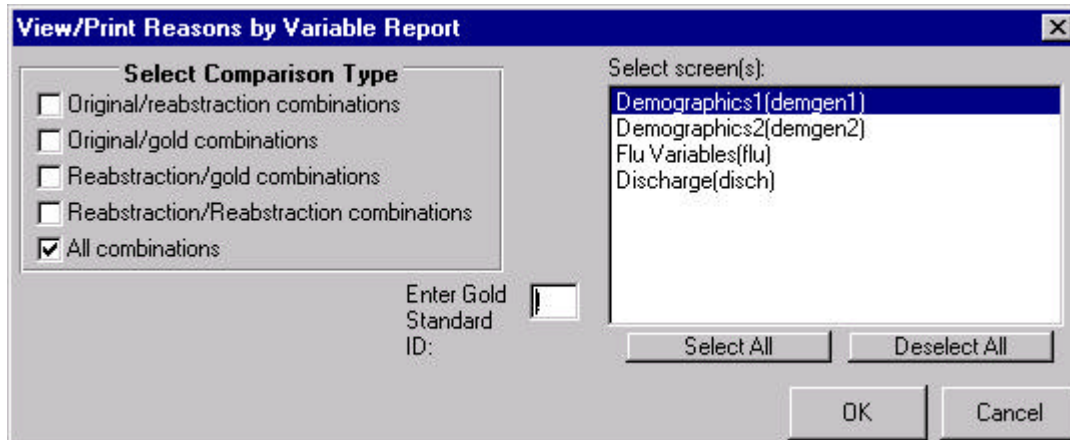
Adjudicated value: 5

Reason: Entry

Adjudicator comments:

VIEW/PRINT REASONS BY VARIABLE REPORT

This report provides a summary of the numbers and types of reasons given for errors for each variable grouped by data entry screen.



Before generating the report, the following criteria must be specified:

- **Comparison Type.** Indicate the comparison type by selecting one or more of the check boxes that represent the comparison type of interest from the *Select Comparison Type* selection box. The comparison types include: *Original/Reabstraction Combinations*, *Original/Gold Standard Combinations*, *Reabstraction/Gold Standard Combinations*, *Reabstraction/Reabstraction Combinations*, and *All Combinations*. Any or all of the first four types can be selected; selecting *All Combinations* automatically includes all of the options. If the Gold Standard is included in the selections, the Gold Standard ID must be provided in the *Enter Gold Standard ID* text box.
- **Data Entry Screens.** Select one or more data entry screens containing the variables to be evaluated from the list displayed in the *Select a Form* list box. To select more than one screen, click on the screen of interest and hold down the <SHIFT> key until the last screen of interest is reached or use the <SELECT ALL> and <DESELECT ALL> buttons.

Click on the <OK> button to generate the report or click on the <CANCEL> button to exit the **View/Print Reasons by Variable Report** screen without generating the report.

Example of the Reasons by Variable Report:

IQC Data Report: Reasons by Variable

Produced: 06/25/1999 1:00:51 PM

Label:

Filter: No Filter

Options:

Comparison Type:

All combinations

T= Total number of cases abstracted by variable

1= Data Entry Error

2= Information Missed

3= Computer Mismatch Error

4= Poor Record Copy

5= Unclear Element Definition

6= Unclear Location

7= Not Following Rules

8= Conflicting Information

9= Other

Demographics

Fieldname	VariableTitle	T	1	2	3	4	5	6	7	8	9
BPLFMP	FMP	4	0	0	0	0	0	0	0	0	0
BPLSPN	SPNSSN	2	0	0	0	0	0	0	0	0	0
BPXADMDT	ADMDATE	1	0	0	0	0	0	0	0	0	0
BPXAGE	AGE	3	0	0	0	0	0	0	0	0	0

VIEW/PRINT ABSTRACT ACCURACY (KAPPA +) REPORT

This report provides a measurement of the interrater reliability for the abstracted data.

Select Comparison Type

☐ Original/reabstraction combinations

☒ Original/gold combinations

☐ Reabstraction/gold combinations

☐ Reabstraction/Reabstraction combinations

☐ All combinations

Enter Gold Standard ID (if applicable):

☒ Abstract Accuracy Report #1 (1A, 1B, 2)

☒ Abstract Accuracy Report #2 (1C)

☒ Abstract Accuracy Report #3 (7, 16)

☒ Abstract Accuracy Report #4 (9, 10)

☒ Abstract Accuracy Report #5 (18)

☒ Abstract Accuracy Report #6 (Medications)

Note: This report is hardwired to assume that ONLY a computer mismatch is counted as a match. Other reason settings are ignored.

OK Cancel

NOTE:

This report assumes that ONLY a computer mismatch is counted as a match. Other reason settings are ignored.

Before generating the report, the following criteria must be specified:

- **Select Comparison Type.** Indicate the comparison type by selecting one or more of the check boxes that represent the comparison type of interest from the *Select Comparison Type* selection box. The comparison types include: *Original/Reabstraction Combinations*, *Original/Gold Combinations*, *Reabstraction/Gold Combinations*, *Reabstraction/Reabstraction Combinations*, and *All Combinations*. Any or all of the first four types can be selected; selecting *All Combinations* automatically includes all of the options.
- **Select an Abstract Accuracy Report.** Indicate the report type by selecting one or more of the following:
 - **Abstract Accuracy Report #1 (1A, 1B, 2).** Displays dichotomous data elements (excluding those embedded in medications): Variable types 1A (Yes/No); 1B (Yes/No/UTD); 2 (Option Pick One or More).
 - **Abstract Accuracy Report #2 (1C).** Displays categorical data elements (excluding those embedded in medications): Variable type 1C (Option Pick One [any option other than Yes/No/UTD])
 - **Abstract Accuracy Report #3 (7, 16).** Displays continuous data elements (excluding those embedded in medications): Variable types 7 (Number no units); 16 (Number with units)
 - **Abstract Accuracy Report #4 (9, 10).** Displays date/time data elements (excluding those embedded in medications): Variable types 9 (Time); 10 (Date)

- **Abstract Accuracy Report #5 (18).** Displays string data elements (excluding those embedded in medications): Variable type 18 (String)
- **Abstract Accuracy Report #6 (Medications).** Displays medication data elements (variable type): 3 (Medications)

Click on the <OK> button to generate the report or click on the <CANCEL> button to exit the **View/Print Abstract Accuracy (Kappa +) Report** screen without generating the report.

Example of the Abstract Accuracy (Kappa +) Report:

Dichotomous Data Elements (excluding those embedded in the medications)

Variable Types (1A (Yes/No), 1B (Yes/No/UTD) and 2 (Option Pick One or More))

HCFA Contract

Records requested from

Records received from-to

Submodule

Sample

Total cases

Cases designated for reabstract

Abstracted from

Abstracted through

Abstractor ID

Screen	ID	Description	Adjud. Cases	Pos. True	Pos. False	Neg. False	Neg. True	Kappa	Std Error	Acc. %
Flu	FLU VDA	Flu vaccine during admission	4	3	0	0	1	1.0000	0.0000	100.0
Flu	FLU PFV	D/C plan for flu vaccine	4	1	1	0	2	0.5000	0.3750	75.0
Flu	FLU RX	Hx flu vaccine reaction	4	1	0	0	3	1.0000	0.0000	100.0

VIEW/PRINT ADJUDICATED REASON INTERNAL REPORT

This report shows only the mismatches for a selected comparison or set of comparisons. For each pair of abstractions, both the abstractor (Case 1) and the reabstractor (Case 2) are displayed with an asterisk next to the incorrect answer as well as the reason for the incorrect response. A summary of the scoring statistics is provided.

View/Print Adjudication/Reason Report

Note: The comparison list to the right contains the first 150 cases found that match the search criteria.

Note: This report displays only mismatches. This will override your filter settings for including/excluding adjudicated cases and cases with mismatches.

Enter case to search for: T1

Select comparison(s): T1:0A;

NOTE:

This report displays only mismatches. This default setting will override any filter settings for including/excluding adjudicated cases and cases with mismatches.

To specify the criteria, select the **Match Set** (or Match Sets) from the list shown in the *Selected Comparison(s)* list box. Click on the <OK> button to begin generating the report or click on the <CANCEL> button to exit the **View/Print Adjudication/Reason Report** screen without generating the report.

Example of the Adjudicated Reason Internal Report:

IQC Data Report: Adjudication/Reason Internal Report

Produced: 06/25/1999 1:01:44 PM

Filter: No Filter

Case ID: T2, 0, A

Abstractor:ID1

Reabstractor:ID1

* = Incorrect Value

Universe 32

Matches 32

Reliability 100.0%

Summary Statistics:

Total Universe	33
Total Matches	33
Total Abstractor Mismatches	0
Total Reabstractor Mismatches	0
Overall Abstractor Reliability	100.0%
Overall Reabstractor Reliability	100.0%

VIEW/PRINT ADJUDICATED REASON FACILITY REPORT

This report shows only the mismatches for a selected comparison or set of comparisons. For each pair of abstractions, only the abstractor's (Case 1) mismatches are displayed with an asterisk next to the incorrect answer as well as the reason for the incorrect response. A summary of the scoring statistics is provided.

The screenshot shows a dialog box titled "View/Print Adjudication/Reason Report". It contains two notes on the left: "Note: The comparison list to the right contains the first 150 cases found that match the search criteria." and "Note: This report displays only mismatches. This will override your filter settings for including/excluding adjudicated cases and cases with mismatches." On the right, there is a text input field labeled "Enter case to search for:" with the text "T1" entered and a "Select" button. Below this is a list box labeled "Select comparison(s):" with "T1:0:A;" selected. At the bottom are "OK" and "Cancel" buttons.

NOTE:

This report displays only mismatches. This default setting will override any filter settings for including/excluding adjudicated cases and cases with mismatches.

To specify the criteria, select the **Match Set** (or Match Sets) from the list shown in the *Selected Comparison(s)* list box. Click on the <OK> button to begin generating the report or click on the <CANCEL> button to exit the **View/Print Adjudication/Reason Report** screen without generating the report.

Example of the Adjudicated Reason Facility Report:

IQC Data Report: Adjudication/Reason Facility Report

Produced: 06/25/1999 1:02:00 PM

Filter: No Filter

Case ID: T2, 0, A

Abstractor:ID1

Reabstractor:ID1

Admission Date:

Medical Record #:

Discharge Date:

* = Incorrect Value

Universe 32

Matches 32

Reliability 100.0%

Summary Statistics:

Total Universe 33

Total Matches 33

Total Abstractor Mismatches 0

Overall Abstractor Reliability 100.0%

ABSTRACTOR BY CASE REPORT

This report lists the quality by case by abstractor. The case number, date of the abstraction, total number of responses, correct number of responses, and the case quality percentage are listed in this report, as well as the overall abstractor and module scores.

View/Print Abstractor Quality by Case Report

Select Comparison Type

☒ Report Abstractor of Original Cases

☐ Report Abstractor of Reabstraction Cases

Threshold for accuracy:

Accuracy Options

☒ Exact match

☐ +/- 5%

☐ +/- 5%, reason adjusted

OK Cancel

Before generating the report, the following criteria must be specified:

- **Comparison Type.** Indicate whether the abstractor of the original cases or the abstractor of the reabstraction cases will be compared by selecting either the *Report Abstractor of Original Case* radio button or the *Report Abstractor of Reabstraction Cases* radio button from the Select Comparison Type section.
- **Threshold for Accuracy.** By entering a percentage amount between 0 and 100, only percentages at or below the designated amount will be displayed. If a percentage is not entered, the report defaults to 100%.
- **Accuracy Options.** Select the accuracy option by clicking on the radio button that represents the option of interest. The three possible accuracy options that can be select include: Exact match; +/- 5%; and +/- 5%, reason adjusted.

Click on the <OK> button to begin generating the report or click on the <CANCEL> button to exit the **View/Print Abstractor Quality by Case Report** screen without generating the report.

Example of Abstractor by Case Report:

IQC Data Report: Abstractor Quality by Case

Module: FLZ

Produced: 06/25/1999 1:02:20 PM

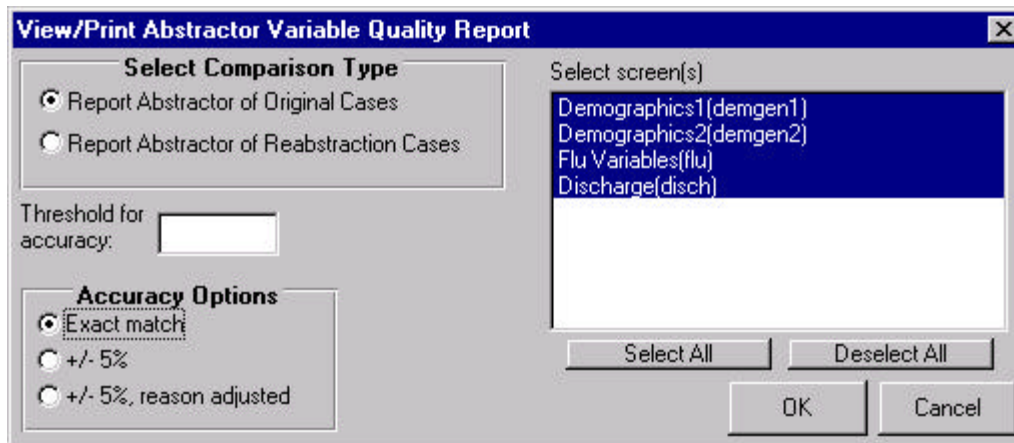
Filter: No Filter

Sample Time Frame:

HCFACTL	Date	Total Responses	Correct Responses	Case Quality
Abstractor: ID1				
T4,0,A	06/22/1999	33	26	78.79%
T2,0,A	06/01/1999	33	33	100.00%
T1,0,A	06/14/1999	33	32	96.97%
T3,0,A	06/21/1999	33	30	90.91%
Overall Abstractor Score:		132	121	91.67%
Overall Module Score:		132	121	91.67%

ABTRACTOR BY VARIABLE REPORT

This report lists the quality by variable by abstractor. The total number of responses, correct number of responses, and the variable quality percentage are listed in this report, as well as the overall variable by variable and module scores.



Before generating the report, the following criteria must be specified:

- **Comparison Type.** Indicate whether the abstractor of the original cases or the abstractor of the reabstraction cases will be compared by selecting either the *Report Abstractor of Original Case* radio button or the *Report Abstractor of Reabstraction Cases* radio button from the Select Comparison Type section.
- **Data Entry Screens.** Select one or more data entry screens containing the variables to be evaluated from the list displayed in the *Select Screen(s)* list box. To select more than one screen, click on the screen of interest and hold down the <SHIFT> key until the last screen of interest is reached or use the <SELECT ALL> and <DESELECT ALL> buttons.
- **Threshold for Accuracy.** By entering a percentage amount between 0 and 100, only percentages at or below the designated amount will be displayed. If a percentage is not entered, the report defaults to 100%.
- **Accuracy Options.** Select the accuracy option by clicking on the radio button that represents the option of interest. The three possible accuracy options that can be select include: Exact match; +/- 5%; and +/- 5%, reason adjusted.

Click on the <OK> button to begin generating the report or click on the <CANCEL> button to exit the **View/Print Abstractor Variable Quality Report** screen without generating the report.

Example of Abstractor by Variable Report:

IQC Data Report: Abstractor Quality by Variable Report

Module: FLZ

Produced: 06/25/1999 1:02:35 PM

Filter: No Filter

Sample Time Frame:

Screen: Demographics

Fieldname: BPLFMP

Title: FMP

Abstractor	Total Responses	Correct Responses	Variable Quality
ID1	4	4	100.00%
Overall Variable Score:	4	4	100.00%

Fieldname: BPLSPN

Title: SPNSSN

Abstractor	Total Responses	Correct Responses	Variable Quality
ID1	4	4	100.00%
Overall Variable Score:	4	4	100.00%

ABSTRACTOR SUMMARY REPORT

This report lists the summary of quality by abstractor. The total number of responses, correct number of responses, and the variable quality percentage are listed in this report, as well as the overall module score.

View/Print Abstractor Variable Quality Report

Select Comparison Type

☒ Report Abstractor of Original Cases

☐ Report Abstractor of Reabstraction Cases

Threshold for accuracy:

Accuracy Options

☒ Exact match

☐ +/- 5%

☐ +/- 5%, reason adjusted

Select screen(s)

Demographics1(demgen1)

Demographics2(demgen2)

Flu Variables(flu)

Discharge(disch)

Select All Deselect All

OK Cancel

Before generating the report, the following criteria must be specified:

- **Comparison Type.** Indicate whether the abstractor of the original cases or the abstractor of the reabstraction cases will be compared by selecting either the *Report Abstractor of Original Case* radio button or the *Report Abstractor of Reabstraction Cases* radio button from the Select Comparison Type section.
- **Data Entry Screens.** Select one or more data entry screens containing the variables to be evaluated from the list displayed in the *Select Screen(s)* list box. To select more than one screen, click on the screen of interest and hold down the <SHIFT> key until the last screen of interest is reached or use the <SELECT ALL> and <DESELECT ALL> buttons.
- **Threshold for Accuracy.** By entering a percentage amount between 0 and 100, only percentages at or below the designated amount will be displayed. If a percentage is not entered, the report defaults to 100%.
- **Accuracy Options.** Select the accuracy option by clicking on the radio button that represents the option of interest. The three possible accuracy options that can be select include: Exact match; +/- 5%; and +/- 5%, reason adjusted.

Click on the <OK> button to begin generating the report or click on the <CANCEL> button to exit the **View/Print Abstractor Quality Summary Report** screen without generating the report.

Example of Abstractor Summary Report:

IQC Data Report: Abstractor Quality Summary Report

Module: FLZ

Produced: 06/25/1999 1:02:53 PM

Filter: No Filter

Sample Time Frame:

Abstractor	Total Responses	Correct Responses	Variable Quality
ID1	132	121	91.67%
Overall Module Score:	132	121	91.67%

VIEW IQC.ERR

Select the View IQC.ERR option from the FILE menu on the main **IQC Program** screen to view the error file produced during the batch comparison process. Since the batch comparison may take time to run, the errors are noted in a file.

After viewing the errors, select the <OK> button to exit the screen.

DELETE IQC.ERR

To delete the IQC.ERR file after reading or printing it, select the Delete IQC.ERR option from the FILE menu on the main **IQC Program** screen.

REBUILD INDEXES

If the batch comparison is interrupted, the MedQuest Quality table indexes for the module may not be correct. To rectify the problem, select the Rebuild Indexes option from the FILE menu item to rebuild the indexes.

RECOVER FROM ARCHIVE

If the option to save the original values to an archive database when loading a comparison set was enabled in the MedQuest utility, the user has the capability to recover the original data from the archive database. From the FILE menu item select the Recover from Archive option to recover the original Case 1 data for the comparison set that is currently loaded.

For example, if TEST1;0;A; is loaded, by selecting the Recover from Archive option, the TEST1;0; data will be recovered into the original database. This option will also recover the reabstraction data to the reabstraction database if the Case 1 reabstraction ID is not equal to zero (0), i.e., the option *Only Archive for ReabID=0 or Blank (No Reabstraction Data)* has not been specified in MedQuest.

APPENDIX A

MEDQUEST QUALITY FIELDS

Fld	Field Name	Type	Width	Description
1	HCFACTNL	Character	25	Unique case identifier
2	COUNTER	Integer	19	Unique number for each record in MATCH SET
3	ORIGREAB	Character	1	REABSTRA field for Case 1 (HCFACTNL + ORIGREAB = Case 1)
4	REABREAB	Character	1	REABSTRA field for Case 2 (HCFACTNL + REABREAB = Case 2)
5	FIELDNAME	Character	8	Field name from module data dictionary
6	EDITTYPE	Integer	19	Edittypes from module data dictionary (see data dictionary description form)
7	ORIGVAL	Memo	30	Value for Case 1
8	REABVAL	Memo	30	Value for Case 2
9	AJUDVAL	Memo	30	Adjudicated value
10	DENOMCNT	Integer	19	Denominator count for this record (1 or 0)
11	MATCHCNT	Integer	19	Match count for this record (1=match or 0=no match)
12	SETID	Integer	19	Unique identifier of set of linked variables
13	FORM	Character	8	Data entry screen on which variable appears
14	REASON	Character	5	Reason for mismatch (0 - 9)
15	TITLE	Character	30	Title for variable from module data dictionary
16	GROUPORD	Integer	19	For linked variables, numeric location within set
17	PARENT	Character	1	If parent variable with children
18	CHILD	Character	1	If child variable with parent

19	MULTIPLE	Character	1	If multiple variable
20	NOTES	Memo	10	Detailed explanation of reason for mismatch
21	MATCHCOD	Character	1	Match Field